

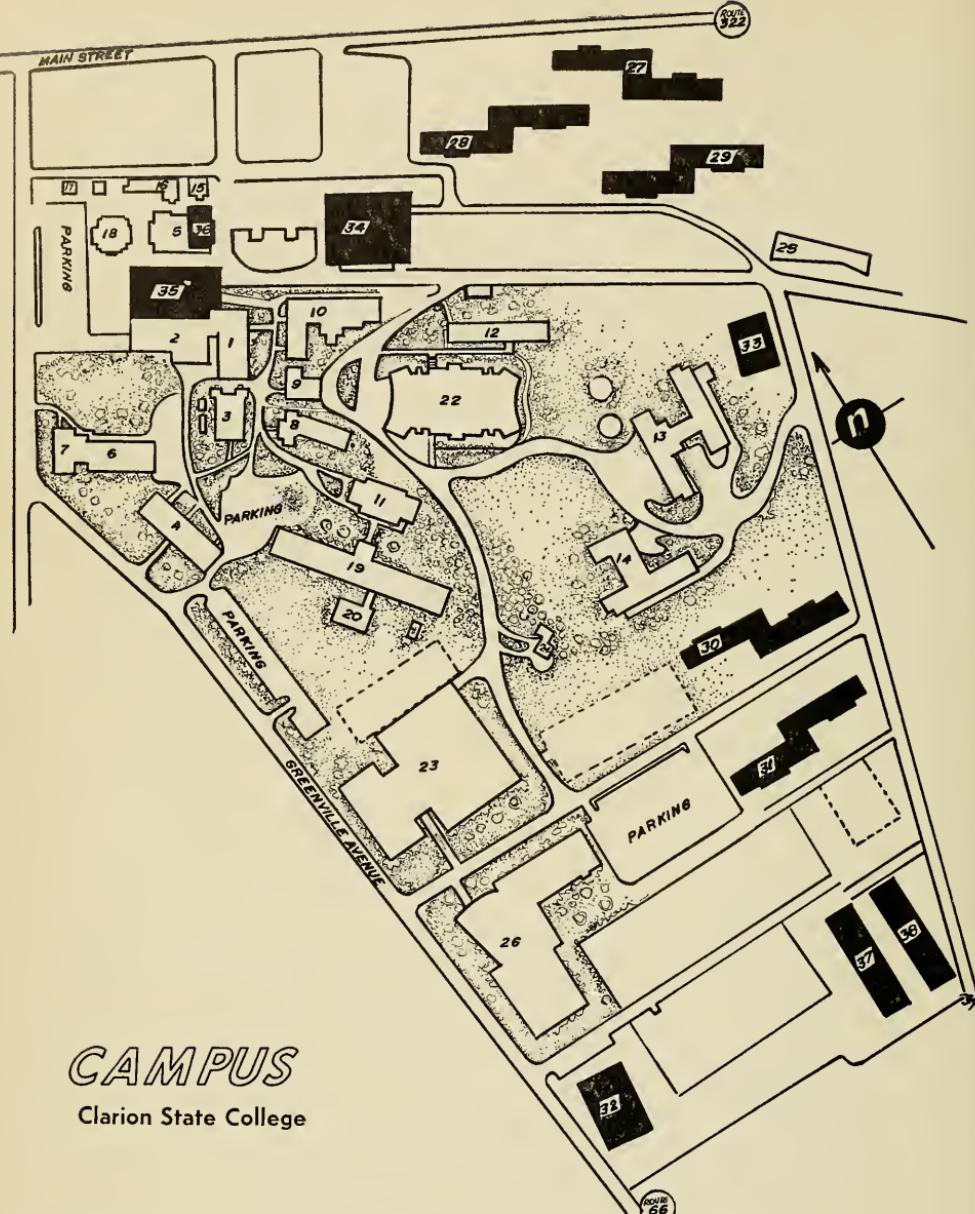
CENTENNIAL

67

67

67/68

CLARION STATE COLLEGE  
CLARION, PENNSYLVANIA



# CAMPUS

Clarion State College

1. Administration
2. Carlson Library
3. Seminary Hall
4. Davis Hall
5. Science Hall
6. Campus Demonstration School
7. Special Education Center
8. Egbert Hall  
(Offices, Dean of Students,  
Infirmary)
9. Music Hall  
(President's Apartment)
10. Becht Hall
11. Harvey Gymnasium  
(Student Union)
12. Ballentine Hall
13. Given Hall
14. Ralston Hall
15. Laundry Services
16. Power Plant
17. Electrical Center
18. Chapel
19. New Science Building
20. Planetarium
21. Greenhouse
22. Chandler Dining Hall
23. New Gymnasium
24. President's Residence\*
25. Warehouse
26. Fine Arts Center
27. Dormitory\*
28. Dormitory\*
29. Dormitory\*
30. Dormitory\*
31. Dormitory\*
32. Learning-Research Center\*
33. Health Services Center\*
34. Student Center\*
35. Library Addition\*
36. Administration Building\*
37. Maintenance Division\*
38. Maintenance Division\*

\*Proposed Buildings

# The Clarion

Volume LVI

1967

Number 1

## Clarion State College

Clarion, Pennsylvania

Member of American Association of Colleges for  
Teacher Education

Accredited by Middle States Association of Colleges  
and Secondary Schools

National Council for Accreditation of  
Teacher Education

The Catalog Number  
1967-1968

Published by the Board of Trustees

---

Entered at the post office at Clarion, Pennsylvania, as  
second class matter under the Act of August 24, 1912

Clarion State College  
welcomes qualified students,  
faculty, and staff from all  
racial, religious, ethnic, and  
socio-economic backgrounds.

## TABLE OF CONTENTS

Calendar .....	4-5
Campus and Facilities .....	6
Residence Halls .....	8
Venango Campus .....	9
Student Affairs .....	10
Student Personnel Service .....	10
Student Activities .....	14
General Information .....	22
Admissions .....	23
Withdrawals .....	26
Scholarship Requirements .....	26
Fees .....	28
Financial Aid Services .....	34
Degree Programs .....	37
Teacher Education .....	39
Certification .....	40
Requirements in Teacher Education .....	41
Student Teaching .....	42
Public School Student Teaching Centers .....	43
General Education Distribution—Teacher Education .....	45
Professional Education Distribution—Elementary .....	46
Curriculum—Elementary .....	46
Professional Education Distribution—Secondary .....	47
Curriculum—Secondary .....	47
Areas of Major Specialization—Secondary .....	48
Curriculum—Library Science .....	60
Library Science Distribution .....	62
Safety Education .....	63
Teaching the Mentally Retarded .....	63
Speech Pathology and Audiology .....	65
Public School Nursing .....	68
Venango Campus Courses .....	69
Liberal Arts .....	70
Liberal Arts Curriculum .....	71
Humanities Major—Liberal Arts .....	74
Natural Sciences and Mathematics Major—Liberal Arts .....	76
Social Sciences Major—Liberal Arts .....	78
Course Descriptions .....	80
Enrollment Summary .....	130
Board of Trustees .....	130
State Board of Education .....	131
Administrative Staff .....	131
Faculty .....	133
Emeriti .....	147
Index .....	149

# CALENDAR 1967-1968

---

## PRE-SESSION 1966

Session Begins .....	Monday, June 6
Session Ends .....	Friday, June 24

## REGULAR SESSION 1966

Session Begins .....	Monday, June 27
Session Ends .....	Friday, August 5

## POST SESSION 1966

Session Begins .....	Monday, August 8
Session Ends .....	Friday, August 26

## FIRST SEMESTER 1966-1967

Registration of Freshmen and New Students .....	Monday, September 12 Tuesday, September 13
Registration of Upperclassmen .....	Tuesday, September 13 Wednesday, September 14
Classes Begin at 8:00 A.M. ....	Thursday, September 15
Evening Classes Begin .....	Thursday, September 15
Thanksgiving Recess Begins 5:05 P.M. ....	Tuesday, November 22
Thanksgiving Recess Ends 8:00 A.M. ....	Monday, November 28
Christmas Recess Begins 5:05 P.M. ....	Friday, December 16
Christmas Recess Ends 8:00 A.M. ....	Tuesday, January 3
Evening Classes End .....	Thursday, January 12
Final Examinations .....	January 13 to January 20
Semester Ends .....	Noon Tuesday, January 24

## SECOND SEMESTER 1966-1967

Registration .....	Monday, January 30 Tuesday, January 31
Classes Begin .....	Wednesday, February 1
Evening Classes Begin .....	Thursday, February 2
Easter Recess Begins 5:05 P.M. ....	Wednesday, March 22
Easter Recess Ends 8:00 A.M. ....	Tuesday, March 28
Evening Classes End .....	Thursday, May 18
Final Examinations .....	May 19 to May 26
Alumni Day .....	Saturday, May 27
Commencement .....	Sunday, May 28
Semester Ends .....	Monday, May 29

# PROPOSED COLLEGE CALENDAR

## 1967-68

### PRE-SESSION 1967

Session Begins .....	Monday, June 5
Session Ends .....	Friday, June 23

### REGULAR SESSION 1967

Session Begins .....	Monday, June 26
Session Ends .....	Friday, August 4

### POST SESSION 1967

Session Begins .....	Monday, August 7
Session Ends .....	Friday, August 25

### FIRST SEMESTER 1967-68

Registration of Freshmen and New Students .....	Monday, September 11 Tuesday, September 12
Registration of Upperclassmen .....	Tuesday, September 12 Wednesday, September 13
Classes Begin at 8:00 A.M. ....	Thursday, September 14
Evening Classes Begin .....	Thursday, September 14
Thanksgiving Recess Begins 5:05 P.M.	Tuesday, November 21
Thanksgiving Recess Ends 8:00 P.M. .	Monday, November 27
Applications for graduation in May, or Summer 1968, are due ...	Friday, December 1
Christmas Recess Begins 5:05 P.M. ...	Friday, December 15
Christmas Recess Ends 8:00 A.M. ....	Tuesday, January 2
Final Tests Start .....	Saturday, January 13
Evening Classes End .....	Thursday, January 18
Semester Ends Noon .....	Tuesday, January 23

### SECOND SEMESTER 1967-68

Registration .....	Monday, January 29 Tuesday, January 30
Classes Begin .....	Wednesday, January 31
Evening Classes Begin .....	Thursday, February 1
Applications for graduation in January, 1969, are due .....	Friday, April 5
Easter Recess Begins 5:05 P.M. ....	Wednesday, April 10
Easter Recess Ends 8:00 A.M. ....	Tuesday, April 16
Final Tests Start .....	Thursday, May 16
Evening Classes End .....	Thursday, May 23
Alumni Day .....	Saturday, May 25
Commencement .....	Sunday, May 26
Semester Ends .....	Saturday, May 25

## THE CAMPUS AND FACILITIES

### Campus

The main campus of Clarion State College presently occupies a tract of thirty acres. In addition, a twenty-nine acre plot has been purchased and developed for a new athletic and recreational area. Plans are now underway to add more land area to implement the projected building program. The campus plan is pleasingly arranged and ordered so that unity and function will be integrated with aesthetic considerations of space as the building program develops.

**Seminary Hall**, the oldest building on campus, houses the main offices, practice rooms, rehearsal areas, and classrooms of the Music Department.

**Music Hall** is now a classroom and office building for the Speech Department with the President's home on the second floor.

**Science Hall** contains the Physical Science and Geography Departments, classrooms, laboratories, and offices.

**The Chapel**, an attractive stone building with a seating capacity of four hundred, is used for concerts, dramatic presentations, and lectures.

**The Administration and Library Building** is a new structure facing Wood Street from the front campus. The west wing is occupied by the Library, the Library Science Department, and classrooms. The second wing houses college administrative and business offices. The college book store and the faculty post office are in the basement of the administrative wing.

**The A. J. Davis Education Building** was named for A. J. Davis, president of the college from its beginning as a state institution in 1887 to 1902. It is modern in design and well equipped. This structure houses the Art, Audio-Visual, and Biology departments. A new origination studio, a part of the college's closed circuit television facilities, is also located on the first floor of this building.

**Thaddeus Stevens Laboratory School** was named for Thaddeus Stevens, the father of the Pennsylvania Public School Law passed in 1834. This building contains accommodations for the first six grades of the public school and a large, well-equipped kindergarten. This school is used for demonstration purposes, directed observation, and student teaching by prospective elementary teachers. Closed circuit television facilities are also housed in this building and are used for observational activities in relation to the instructional program of the Department of Education.

**The Special Education Building** is a new wing on the west end of Thaddeus Stevens Laboratory School facing Eighth Avenue. The structure houses five classrooms, a hearing and speech clinic, a psychological clinic, a thirty-station language laboratory, and the Special Education reception center and offices.

**The Harvey Gymnasium** was named for Frank Laird Harvey, a Trustee of the College from 1911 to 1932. The building is provided with gymnastic equipment of various kinds, recreation rooms, and offices. A recently constructed Student Union is located on the ground floor of this building and includes snack bar facilities and a large commons room. With the completion of the new Gymnasium, this facility will be converted to other college use.

**The Rena M. Carlson Library**, named for the College Librarian from 1929 to 1963, is located in the Library-Administration Building and contains approximately 100,000 volumes. Over 1,000 periodical titles are received currently in addition to many more titles bound or on microfilm. The Library is growing rapidly to provide students and faculty with materials of instruction, cultural advancement, recreation, and research. A significant reference collection, an open-stack policy permitting all library users direct access to books, and a dedicated staff supply the resources essential for successful college experiences. The new building also houses a Curriculum Library, a Juvenile and Young People's Collection, and the Department of Library Science classrooms and offices.

An elementary school library in the Thaddeus Stevens Laboratory School serves children, teachers, and student teachers. The branch library at Oil City accommodates immediate research needs for students and faculty on the Venango Campus.

**Chandler Dining Hall**, named for Dr. Paul G. Chandler, President Emeritus of the College, is the newest addition to campus buildings. Modern in design and equipped with the latest food preparation and serving facilities, it provides an attractive and comfortable dining environment.

**Speech and Hearing Clinic** with diagnostic and remedial speech and hearing services is available to all college students and other interested individuals requesting these services. The Clinic is housed in the Special Education Center and is equipped with the latest diagnostic and remedial instruments.

**Science Laboratories** for physical sciences are located in Science Hall, and for biological sciences in Davis Hall. Each is well equipped with new, modern apparatus and other facilities for teaching biology, nature study, zoology, botany, physics, and chemistry.

**Infirmary** services are provided in a well equipped facility located on the first floor of Egbert Hall. A professional nursing and medical staff is available for all general health problems.

**New Facilities** under construction include a gymnasium and natatorium, a fully integrated science center, and a fine arts center with a large auditorium.

**Long Range Planning** includes the development of additional facilities which are part of the College Master Plan projected for completion by 1972. Included in the Plan are additional library facilities, classroom buildings, a learning and research center, a health services center, an administration building, a student center, and a number of additional dormitories as well as supporting services buildings. As part of this program, plans are underway to double the existing acreage of the campus.

## RESIDENCE HALLS

**Ballentine Hall**, residence for young men, was named for Professor John Ballentine, who was a teacher and at various times acting president at the College from 1887 to 1920.

**Becht Hall**, residence for young women, was named for J. George Becht, who was president of the College from 1904 to 1912.

**Egbert Hall**, residence for young women, was named for Professor Walter R. Egbert, who was teacher and dean of men at the College from 1887 to 1920.

**Lorena Given Hall**, residence for young women, was named for Lorena M. Given who taught at the College from 1893 to 1919.

**Ralston Hall**, a residence for young women, was named for Mrs. Amabel Lee Ralston, Dean of Women, 1922 to 1930.

## VENANGO CAMPUS

Clarion State College operates an off-campus center located in Oil City, Pennsylvania. Clarion's Venango Campus is a tribute to the civic spirit of the people of the Oil City area who supported and financed the venture, making possible the construction of an attractive, modern building containing classrooms, laboratories, a library, a recreation room, and college offices. The Campus is located on a sixty-acre wooded area on West Front Street overlooking the Allegheny River.

In addition to the classroom building, a double-winged dormitory, housing 105 women students and 105 men students in the separate wings and having kitchen and dining hall facilities, was completed in the fall of 1965.

Staffed with competent, professional educators, Venango Campus offers students a convenient, inexpensive opportunity for two years of their college education. Courses offered at the branch campus in both teacher education and the liberal arts are identical with those offered on main campus. At the end of two years, students may transfer from Venango Campus to the main campus at Clarion, retaining all the credits they have taken.

In addition to the two-year college curriculum now offered, the Oil City Chamber of Commerce, with the cooperation of Venango Campus, has established at the Campus building an adult evening school offering a variety of non-credit courses.

## STUDENT AFFAIRS

Clarion provides not only for the academic training of young men and women, but also for their all-around development as mature, self-confident, socially competent individuals. All campus facilities, including residence halls, dining rooms, social centers, and other places where students meet and live, are organized and used as means for helping students toward cooperative, democratic living.

To help ensure this development, certain student personnel services are provided. These services enable those enrolled at Clarion to perform more adequately as students and to derive maximum benefit from the academic, cultural, social, and recreational opportunities offered by the campus environment. In addition, every administrative or teaching member of the faculty is charged with the responsibility of assisting students to make a wholesome adjustment to college life.

Student activities represent an important phase of student-faculty association and of social and recreational experience. Campus organizations provide a program in which each student may engage, according to his individual interests, in activities which meet his own needs and desires.

Clarion students have a voice in forming and administering college policies by serving with the faculty on many standing committees. Through student government, students exercise direct control over many phases of student life.

### STUDENT PERSONNEL SERVICES

#### Counseling and Guidance Services

In order to assist each student in the achievement of maximum personal development at the college, counseling and guidance services are provided. After admission to the college, an organized program of orientation testing and counseling is made available to each student. Entering freshmen are required to complete a series of tests, the results of which are made available to the academic advisors of each student as well as members of the Counseling Service.

The student counseling service of the college is intended to aid students with common problems encountered in college, such as inability to concentrate on studies; worries about home, school, or social life; or undue doubts about one's own ability.

Referrals to this service should be submitted through the director of the service. These referrals may originate from the person himself, friends, college faculty members, or parents. Recognized problems of a specific nature will be channeled to counseling staff members prepared to work with the student.

Confidential permanent records are maintained for each individual student. Referral is on a voluntary basis only to those students who wish to accept and participate in the counseling service. For those students in need of more comprehensive psycho-therapeutic care, a referral service is maintained by the college with the Regional Mental Health Clinic. These services are provided at no cost to the student for the first several visits; however, a minimal fee is assessed for extended care or treatment.

### **Food Service**

Wholesome, well-balanced meals are provided by the Servomation-Mathias Company in the new Chandler Dining Hall. All resident students are required to eat in the college dining room. A limited number of students who live off campus may do so. Students who board at the dining hall will not be permitted to withdraw during a semester unless they leave school.

Meals can be provided for a limited number of guests in the college dining room. Individual meal rates are: breakfast, 60 cents; lunch, 25 cents; and dinner, \$1.25 plus tax. These fees are payable to the food service manager.

### **Health Service**

Recognizing that health is a basic objective of education, the college provides for the protection and development of the health of its students. An infirmary, located on the first floor of Egbert Hall, is staffed with resident nurses and offers medical service on a 24-hour, 7-day basis. Five double rooms are available for in-patient service.

The college physician holds office hours for out-patient service between 9:00 A.M. and 10:30 A.M., Monday through Friday. Additional visits to infirmary patients are made as required. When ill, students are expected to make every effort to visit the infirmary during regular clinic hours.

Infirmary service and privileges are available to day-students as well as to resident students; however, neither the college physician nor nurses can make house calls off-campus. Resident students should come to the infirmary for treatment whenever possible. Nurses may call at residence halls in cases of extreme emergency. A Parental Permit form must be on file in the infirmary before a minor student can be treated by the staff of the Health Service.

Medical services in addition to routine infirmary treatment or drugs and medicines not normally stocked by the infirmary are readily available within the community of Clarion; however, the student is responsible for any expense incurred. If hospitalization or treatment beyond the capabilities of infirmary facilities or equipment is indicated, parents will be contacted immediately in order that their wishes may be known.

In any case requiring transportation to a hospital, an ambulance will be used at the expense of the individual involved.

In order to ease the financial burden which could result from serious or extended illness or injury, Clarion requires all students to join a group insurance plan which covers the student from the day college opens until the end of a college year. A waiver privilege may be extended to those students who have private coverage. A policy may be taken for a full twelve months instead of for the college year, if a student desires.

Following are the essential provisions of the plan, which are incorporated into a control policy held by the college:

**Accident**—Reimbursement will be made up to \$5000 for each accident whether the accident occurs at college, at home, while traveling, or while participating in intramural sports or intercollegiate athletic activities, and for expenses including X-rays; hospital bills; nurses', physicians', and surgeons' fees; laboratory costs; medicines; and, in fact, any medical expense incurred as a result of an accident. Reimbursement for injury to natural teeth is limited to \$200.00.

**Illness**—Reimbursement, not to exceed \$1000.00 for each illness, will be made for actual medical expenses related to illness contracted and treated during the period for which the student is insured. Expenses include but are not limited to X-Rays; laboratory examinations; hospital bills; nurses', physicians', and surgeons' fees; medicines; and surgical appliances.

### **Housing Services**

Students at Clarion State College live in residence halls, in fraternity houses, in their own homes, or in approved homes in town. Freshman men and all women are required to live in the residence halls unless commuting from home. Sophomore men are required to live in residence halls unless they are living in approved fraternity houses or commuting from their homes. Some special cases, i.e., students working for room and board, etc., may be granted permission to live off-campus. Students residing in campus housing facilities must continue in residence for the entire year unless they withdraw from college or move to another community for the purpose of student teaching.

Student rooms in the residence halls are furnished with beds, desks, chairs, bureaus, and closets. The college provides pillows, pillow slips, and sheets. Students should plan to furnish blankets, a study lamp, towels, washcloths, and soap. Many students also provide window curtains, dresser scarves, bed

spreads, and small throw rugs. Radios and record players are permitted if they are operated with due consideration for others; however, other electrical appliances are not permitted in the rooms.

Residence Hall Rules and Regulations are for the most part contained in the student handbook. Current rules and regulations have been established and are enforced by the various House Councils.

A list of approved rooms in town is available upon request in the Office of the Dean of Students. Students not living in the residence halls or commuting from their homes are required to select rooms from this approved list and to make all arrangements for rental with the householder.

#### **Placement Service**

The College Placement Service assists both teacher education and liberal arts graduates in obtaining positions for which their college program has qualified them. Vacancy notices are received from public schools, government agencies, business, and industry and are relayed to those who are registered with the Placement Services. Assistance is given college students and personnel officials in arranging for employment interviews. Placement credentials are prepared and distributed to support the candidacy of registrants. Students' competence in their areas of specialization, their conduct, and their general demeanor are presented in a professional manner by the Placement Service for review by prospective employers.

The Placement Service is a free service. Graduates of former years are served as well as current seniors, and all are urged to maintain their contacts with the Placement Service as a means of facilitating professional promotion.

Counseling and guidance in placement are provided for all registrants. Students are encouraged to call personally at the Placement Office. Following graduation, placement matters are handled by telephone communication or mail.

All communications should be addressed to the Director of Placement.

#### **Veterans' Affairs**

Clarion is approved by the Veterans Administration to offer the regular degree curricula to veterans and children of deceased veterans.

Credit for educational experience in the Armed Services is allowed on the basis of the recommendations of the American Council on Education.

Veterans seeking information should consult the Dean of Academic Affairs.

## STUDENT ACTIVITIES

Student activities at Clarion are viewed as another means of self-development; therefore, the responsibility for the success of any activity or organization must rest with the students involved. As a result of this policy, ample opportunity exists for gaining experience in leadership and self-government.

### Student Government

Through participation in student government, students have an opportunity to gain experience in democratic living and self-government. All students become members of the Clarion Students' Association upon their initial enrollment at Clarion and, thereby, eligible to participate in the election of the Student Senate, governing body of the Association. The Student Senate serves as a coordinating body for student activities and a means of communication between students and faculty and administration.

In addition, the Student Senate is responsible for the expenditure of student activity fees through allocations to the various activities and organizations. The Senate has a less direct, but nevertheless important, relationship to other Association operations such as the College Bookstore and the Student Union Snack Bar, and it confirms nominations of student representatives to various standing committees of the college made by the President of The Clarion Student Association.

Other opportunities for self-government are provided through the governing boards of the Association of Women Students, Panhellenic Council, Inter-Fraternity Council, the Day Students' Association, and the various residence hall councils and boards.

Each year, prior to the opening of college, a group of students who have shown actual or potential leadership qualities through their participation in student affairs and election to leadership positions are invited to return to the campus to participate in a Leadership Workshop. This Workshop is sponsored by the Office of the Dean of Students and the Student Senate and is coordinated by a student chairman.

The Leadership Workshop has as its basic purpose the development of positive student leadership. It also is planned to give potential leaders an opportunity to discuss various methods of leadership and to gain a working knowledge of the tools of leadership.

The full utilization of this leadership is a very necessary ingredient of success in any college or university, and the maximum development of the leadership potential of each student must be considered an important part of the educational process. It is a well established fact that even though a

college may have an excellent faculty and physical plant, it cannot attain true excellence unless it also has a capable and energetic student body able and willing to accept the responsibilities inherent in leadership.

### Cultural Program

In addition to full utilization of the numerous performing groups composed of members of the student body and faculty, the college presents each year a series of performances by nationally known personalities and organizations. This series is arranged by the Concert and Lecture Committee, a subcommittee of the Student Affairs Committee of the college having equal student and faculty representation.

### Social Program

The purpose of the extensive and varied activities program is that of making the student's college life richer and more enjoyable. The social functions are financed from allocations of student activity fees made by the Student Senate and managed by the Social Committee. This committee consists of an equal number of student and faculty representatives. Persons who are not enrolled in the college are admitted to parties, dances, and other events only as guests of regular students or faculty members.

Among the major events of the year are Homecoming Day, Christmas Formal Dance, Winter Capades, Greek Sing, Inter-fraternity-Panhellenic Dance, Spring Carnival, Alumni Weekend and the Spring Prom. During the year there are faculty-student coffees, receptions, teas, banquets, luncheons, and special dinners. These activities center in the Harvey Gymnasium, Student Union, residence hall lounges, and the College Dining Room.

**Sororities.** Greek letter social organizations offer an enhancement to life outside the classroom for those students who accept the responsibilities involved in membership. Sororities provide an opportunity for women students to develop close friendships within a group whose aims are common to their own. They promote scholarship, cultural interests, service projects and participation in campus activities. The national sororities are Delta Zeta, Sigma Sigma Sigma, and Zeta Tau Alpha. The local sororities are Sigma Delta Phi and Beta Chi Upsilon.

Panhellenic Council is the advisory governing board for all Clarion State College sororities. The council promotes co-operation and coordination of activities and standards between the sororities and the fraternities. Two representatives from each of the five sororities on campus compose the membership of the Council. Two major social activities planned jointly by Panhellenic and Inter-fraternity Councils are the Greek Sing and the IFC-Panhellenic Dance.

**Fraternities.** Chapters of six national fraternities, Alpha Phi Rho, Phi Sigma Epsilon, Phi Sigma Kappa, Sigma Tau Gamma, Theta Chi, and Theta Xi, are located on the Clarion Campus. One local group, Alpha Gamma Phi, also contributes to the social program. Members of several of these organizations live in chapter houses located near the college campus.

Inter-fraternity Council is the governing organization and is composed of representatives of the seven fraternities. Under the provisions of its constitution, it is responsible for the co-ordination of pledging activities and the arbitration and adjudication of violations of college and fraternity regulations. In addition, it works actively with the Panhellenic Council to enhance the position and welfare of all Greek letter organizations on the campus.

### Athletic Organizations

**Athletics for Women.** Provision is made for participation of all women students in many forms of athletics. Speedball, soccer, volleyball, basketball, baseball, tennis, riflery, archery, golf, hiking, and other sports are open to students. Minor activities in badminton, shuffleboard, and ping-pong are also available.

Intramural competition for women is sponsored by the Women's Athletic Council, which is an organization composed of women who have attained eligibility through a sports point system. The intramural program furnishes an opportunity for those with officiating as well as playing abilities. Coaching advantages offered in this way have helped some girls with summer camp problems in the techniques of directing sports.

Development of desirable traits of sportsmanship, leadership, and ability to work and play with others is promoted at all times. Personal skills and efforts toward their improvement by individuals are likewise encouraged through class intramural participation. The purpose of the program is to make it functional in the life of the individual in school and after graduation.

**Athletics for Men.** In addition to the required courses in physical education, men may receive extra-curricular credit by participating in intercollegiate and intramural athletics. Intercollegiate athletics include football, basketball, wrestling, riflery, baseball, golf, tennis, and track. Men participate on intramural teams in football, basketball, baseball, soccer, volleyball, bowling, badminton, table tennis, handball, and horseshoes. There also are available recreation facilities for skiing, tobogganing, archery, shuffleboard, and hiking.

There are athletic fields which provide for intercollegiate football and baseball, as well as for intramural activities. An all weather track is available for track and field

events. The stadium provides seating for about five thousand people at intercollegiate football games.

Through physical education courses, students are given fundamental knowledge of various sports and are taught how to coach these sports.

**Clarion State College Rifle Club.** This group was organized under the auspices of National Board for the Promotion of Rifle Practice through the Director of Civilian Marksmanship. The club is a charter member of the Western Pennsylvania Collegiate Rifle League and participates with other colleges in shoulder-to-shoulder matches. A small-bore rifle range is maintained by the college in Davis Hall where rifle practice is carried on each week. Special instructors' courses are offered to enable students to become qualified Rifle Instructors under the National Rifle Association regulations.

**Varsity "C" Club.** The Varsity "C" Club is made up of men of the College who have earned the "C" in one of the inter-collegiate sports. Awards presented to all members are provided by the club.

The objectives of this club are to aid in the maintenance of pleasant relationships with other colleges and in the promotion of a high standard of conduct on the part of members of the athletic teams.

**Men's Athletic Council.** The Men's Athletic Council is an advisory body for the men's intercollegiate activity program. The Council consists of the Director of Athletics, four other faculty members, one member appointed by the Student Senate, and one member appointed by the Varsity "C" Club.

### Musical Organizations

**Clarion State College Concert Choir.** Membership in the Concert Choir is by audition only. Auditions are held at the beginning of each semester, and membership is open to any student who can satisfactorily pass the audition examination. The Concert Choir has a long and distinguished history as a performing group. The annual spring tour takes the choir to churches and high schools throughout western Pennsylvania, where it presents both sacred and secular programs of the finest choral literature, from the early Polyphonic Period to works by contemporary composers. In addition, the Concert Choir serves the college campus by presenting major works such as **The Creation** by Haydn; **The Messiah** by Handel; the **Elijah** by Mendelssohn; and the **Requiem Mass** by Cherubini. Selected members of the choir have sung in the production of **John Brown's Body** by Stephen Vincent Benet; **Amahl and the Night Visitors** by Gian-Carlo Menotti; and the musicals, **Brigadoon** by Lerner and Lowe and **Can-Can** by Cole Porter. Rehearsals are held three times each week.

**The Madrigal Singers** is a highly select group, made up of advanced students who possess the technique and voice which are vital to this specialized area of music. This group is a flexible one and varies in number from twelve to sixteen voices, depending upon the compositions to be performed. The literature presented by the Madrigal Singers represents some of the finest music ever written for voice. Madrigals, glees, airs, and anthems by Byrd, Weelkes, Wilbye, Dowland, Vecchi, and Caccini form a large part of the repertoire. The Madrigal Singers perform only on special occasions and for selected groups. In addition, the Singers present an annual concert in the College Chapel. Membership is by audition only.

**The Marching Band**, a select group of 80 players, performs at all home and several away football games. It also participates in other school and community events such as the Autumn Leaf Festival. Membership in this band is gained through qualifying auditions which are administered during the first week of the fall semester. Interest is of utmost importance in belonging.

**The Concert Band**, though it has no set number of members, is still a select group. Members are chosen by audition. Symphonic band literature from the classical to the modern period is performed along with the standard band repertoire of overtures, marches, and modern transcriptions of recent Broadway shows. The Concert Band has had the honor of playing with renowned soloists such as Rafael Mendez, Bob Lowry, Jimmy Burke, Frank Arsenault, and Warren Covington. Concert Band activities include performance at concerts given by the College, appearance at community events, and an annual tour of high schools in Pennsylvania and neighboring states. The past year's tour included a two-day performance at the New York World's Fair and a series of concerts in high schools in eastern Pennsylvania and New Jersey where the band was most enthusiastically received. The band rehearses four hours each week.

**The Dance Band**, a highly select group of about seventeen players, performs throughout the entire academic year. The players become members by qualifying in auditions. The Dance Band furnishes music for social functions at the College such as the Homecoming and Valentine Dances. It also plays for such community affairs as the annual Clarion Chamber of Commerce banquet and was invited to play for the Testimonial Dinner given in honor of the Honorable Grace M. Sloan, State Auditor-General. Following the performance at this dinner, the Dance Band was engaged to play for her inauguration in Harrisburg as Auditor General. A spring tour of local high schools is made annually to furnish music for such affairs as senior proms.

**Woodwind and Brass Ensembles** are organized, depending on the talent and instrumentation which is available. Membership in these groups is voluntary.

#### **Professional Organizations**

**Alpha Phi Gamma** is the national, honorary journalism fraternity. Student members are chosen from the staffs of the **Clarion Call** and the **Sequelle** and are elected to membership for outstanding contributions made to journalism at Clarion. In addition, meetings with recognized professionals who are honorary members or guests at fraternity affairs provide important professional contacts in the field.

**Alpha Psi Omega** is a national honorary dramatics fraternity. Alpha Upsilon is the local chapter of Alpha Psi Omega at Clarion. In order to become a member of the fraternity, a certain number of points must be obtained through work both on and off stage.

**College Players.** The campus dramatic organization is known as the College Players. Opportunities for gaining experience in the various phases of play production are afforded through the regularly scheduled club programs and through public productions. By means of discussion and demonstration, members gain a working knowledge of the principles of stage lighting, costuming, makeup, acting, and directing. Membership in the organization is determined by competitive tryouts open to all.

**The Players Studio** is an organization which is devoted to the production of contemporary or experimental drama. Following each performance a panel discussion concerning the play and the production is held.

**Bios Club** is organized for biological science majors. Guest speakers from the Conservation Department, Fish and Wild Life, Forestry Department, professors from other colleges, and field trips are all part of the program designed to enrich the background of this natural science group.

**The Clarion State College Archaeological Association** provides students with an opportunity to participate actively in current field research. Established in 1964, the organization sponsors field trips, lectures, films, exhibits, and museum visits in addition to actual field excavations. The membership is open to all Clarion State College students interested in archaeology. Bi-weekly meetings are held during the spring, summer, and fall. The field program is part of the upper Allegheny archaeological survey conducted in conjunction with the State Archaeologist's office in Harrisburg and the Carnegie Museum of Pittsburgh.

**Clarion State College Forensic Society** is an organization whose purpose is to sponsor programs that furnish training and experience in public speaking, discussion, debate, extem-

pore speaking, and interpretative reading. Among activities are programs and contests on the campus; appearances before civic, cultural, and educational groups; and participation in intercollegiate debate tournaments and speech festivals.

**Clarion State College Oral Interpretative Reading Guild.**

The Oral Interpretative Reading Guild members are interested in the oral re-creation of literature for an audience. The Guild provides training in the analysis of literature; the appreciation of literature as a "total work of art"; and training in the communication of literature via facial, vocal, and bodily expression. The Fall Oral Interpretation Reading Invitational Festival; the Spring Festival; participation in intercollegiate festivals; and appearances before civic, cultural, and educational groups are among the activities of the Guild.

**The Clarion State Students Civil Liberties Union** is an extra-curricular organization maintained for the purpose of benefiting all students. The Union is concerned with the civil liberties of the individual college student and the processes by which they are guaranteed.

**Sigma Alpha Eta** is a national honorary fraternity for students majoring in speech pathology and audiology. Membership is open to students with an interest in these areas, as well as to those who seek professional training in the field. Its objectives are to create and stimulate an interest in the fields of speech and hearing science; to encourage professional growth; to foster a spirit of unity by co-ordinating the interests and efforts of persons with a common goal by offering opportunities for social and professional fellowship; to provide situations in which students and faculty may work together to advance the profession as a whole; to aid in public relations with other college departments and with local organizations interested in learning about the profession.

**Student Pennsylvania State Education Association** seeks to develop and cultivate such desirable professional qualities as leadership, character, and scholarship among prospective teachers engaged in their pre-service preparatory work. Its purposes are exploratory, prevocational, and character forming, and its members can gain useful knowledge of the opportunities and requirements related to the teaching profession. The organization is unique in that it has the possibility of providing active participation in local, state, and national education associations. Membership is encouraged for college students in all curricula.

Through the S.P.S.E.A., the prospective teacher cultivates qualities of personality and character, develops enthusiasm for and loyalty to his chosen vocation, and acquires a sense of professional vision. Student members receive each month the journals of state and national education associations.

Membership in the local chapter of the S.P.S.E.A. should be esteemed an honor, an opportunity, and a personal responsibility of a professional nature. School superintendents and placement officials report that membership in the chapter frequently determines which candidate may be chosen for a specific teaching position.

### Publications

**The Clarion Call** is the bi-weekly College newspaper. Published by the Clarion Students' Association, it follows regular newspaper style and format. Staff participation is essential for students with an interest in entering journalism, journalism education, or publications' advisement. Prior experience in journalism is helpful but certainly not essential for success. Certain editorial and business positions may receive financial remuneration.

**The Clarion**, which is published under the guidance of the English Department, presents a channel of creative communication for those students whose interests and talents are in this area. This publication is the culmination of the year's best in creative writing by Clarion students.

**The Sequelle** is the College yearbook. The staff is made up of students from all classes and curricula and truly represents all interests on campus. Staff membership is invaluable to the student who plans to teach, advise, or work in this area of journalism. Professional help is available to the staff as they plan, write, and create the book. Certain editorial positions may receive remuneration.

### Service Organizations

**Circle "K" Club** is a men's organization sponsored by the Kiwanis Club of Clarion. The purpose of the club is to provide service to the college. Activities have included ushering at Concert-Lecture programs, assisting the American Red Cross during Blood-mobile visits to the campus, and sponsoring an annual dance. Any male student may join this club.

**Waiters' Club** is made up of student waiters and waitresses. The main function is to provide improved service to students in the College Dining Room. The club also sponsors two dances and a talent show held in the dining hall during each academic year. These events are open to all students.

### Religious Life

**The Newman Club** is a co-educational organization which provides for the spiritual and cultural heritage of Catholic students. Its activities are guided by a priest chaplain; its policies are suggested by the National Federation and the Regional Province of Newman Clubs, to which the chapter on Clarion Campus belongs.

The Student Christian Association holds weekly meetings on Wednesday evening. The students plan and conduct their own meetings. Each semester the association holds a reception for new students.

## GENERAL INFORMATION

### Accelerated Program

Students who take three summer terms of twelve weeks each may finish the four-year course in three years.

### Automobiles

Freshman students under 21 years of age are not permitted to possess or operate automobiles while at college unless they are commuting from their homes outside the borough limits of Clarion. Other resident students who wish to have automobiles must secure permission through the Office of the Dean of Students.

All automobiles operated by students within the Borough limits of Clarion must be registered with the Office of the Dean of Students. Complete automobile regulations are included in the Student Handbook.

### Course Numbering

Courses numbered **below 100** are usually of remedial nature.

Courses numbered **100 to 199** inclusive are primarily for Freshmen; **200 to 299** for Sophomores; **300 to 399** for Juniors; and **400 to 499** for Seniors. Courses numbered above the student's level may be taken with approval of the department head.

Courses with numbers **ending in 10 to 19** inclusive are General Education and those **ending in 20 to 29** are Professional Education.

Courses with numbers **ending in 30 to 49** inclusive are primarily for students in Elementary Education and those **ending in 50 to 69** are intended for majors in other fields.

The college reserves the right to change the sequence and numbering of courses.

### Evening Classes

Evening classes are organized each semester for the convenience of regular students, in-service teachers, and others who may be interested in college courses. Work done in these courses gives customary college credit and may be applied toward a degree. Information concerning course offerings may be secured by writing to the Dean of Academic Affairs.

## **Student Responsibility for Academic Program**

Each student is individually and personally responsible for learning the requirements of the curriculum which he is following and for seeing that these requirements are scheduled and completed for graduation.

## **Study Year Abroad in Basel, Switzerland**

Clarion State College as a member of the Regional Council for International Education with its Secretariat located at the University of Pittsburgh affords the student an opportunity to study abroad during his junior year. Courses include the disciplines of history, political science, sociology, art, economics, literature, and language. Consult the Liaison Representative of the Regional Council for further information.

## **The Summer Session**

The Summer Session is maintained for the benefit of regular college students as well as for teachers in service. By taking advantage of the summer sessions, teachers can secure the professional training needed to meet the requirements for standard certification. Advanced courses are offered in the summer session for the benefit of teachers who desire to secure credits toward a degree in education or for permanent certification. Workshops are being added for those interested in special problems in education. Library Science certification may be added in three summers and Highway Safety in one summer. Liberal Arts courses are also part of the summer schedule.

Because of its location and environment, Clarion makes a strong appeal to those who desire to combine work with recreation during the summer. The mountain location provides a pleasant climate.

The Pre-summer session lasts three weeks, from June 5 to June 23. The Regular Summer Session of 1967 will open on June 26 and close on August 4. The Post-session includes three weeks from August 7 to August 25.

## **ADMISSIONS**

### **Admission of Freshmen**

In accordance with the principles governing admission adopted by the Board of State College Presidents, five general requirements have been set up for admission to State Colleges:

1. General Scholarship.
2. Character and Personality.
3. Health and Physical Vigor.
4. College Entrance Examination Board Tests.
5. A Personal Interview.

Applicants for admission must satisfy the following requirements as outlined in detail below.

1. General scholarship as evidenced by graduation from an approved secondary school or equivalent preparation as determined by the Credentials Evaluation Division of the Pennsylvania Department of Public Instruction. The applicant must submit scores earned on the Scholastic Aptitude Test administered by the College Entrance Examination Board. Arrangements for taking these examinations are to be made through the high school guidance counselor.

2. Satisfactory character and personality traits as well as proper attitudes and interests as determined by the high school principal, guidance director, or other school official acquainted with the student.

3. Health and physical condition as evidenced by a health examination by the student's family physician reported on the official form and approved by the college physician. No student shall be admitted to the teacher education program who has, in the opinion of the college, disabilities which would impair his service as a teacher.

4. Satisfactory personal and social qualities as determined by a personal interview with the applicant.

5. For admission to special curricula the college may require the applicant to take an appropriate aptitude test in the special field in order to obtain further evidence of ability to succeed in the chosen area.

### **Admission With Advanced Standing**

Applicants transferring from other institutions will not be accepted without official transcripts of credit and certificates of honorable dismissal. All applicants are required to have an interview with an official of the college prior to the opening of the semester in which they wish to enter.

Credit will be given for acceptable courses pursued in accredited collegiate institutions in which the student has made grades of A, B, or C. Where the grades are marked on a percentage basis, work graded five per cent above the minimum passing grade will be accepted. Passing grades of "D" in other institutions will not be accepted. Course grades transferred from other institutions do not affect the quality point average a student earns at Clarion.

Students may not obtain a certificate or degree without a minimum residence of one year (thirty semester hours) in this College.

Teachers in service may complete in extension courses not more than 25 per cent of the courses required for a degree.

Applicants who are not graduates of an approved four-year high school, must have their credits evaluated by the State Department of Public Instruction, Harrisburg, Pennsylvania. Applicants who need this type of evaluation should consult the Registrar of the College. This regulation applies to teachers in service.

All persons who were graduated from a State Normal School prior to September, 1920, and who have a four-year secondary school education will be granted no more than 64 semester hours of credit toward a degree for their normal school work.

No credit for public or private teaching experience, previously credited as high school equivalent or as equivalent professional credit toward graduation from a two-year curriculum, shall be granted toward meeting the requirements for entrance to or graduation from the four-year curriculums.

In accordance with a state regulation a maximum of six semester hours of credit may be completed in one semester while a person is engaged in full-time teaching.

No credit is given for correspondence work taken after September 1, 1927, except that pursued through the United States Armed Forces Institute or similar service organizations.

### **Admission of Freshmen in September, 1967**

Applicants for admission to the freshman class in 1967 should read and observe carefully the following procedure:

1. Come or send to the Admissions Office of the College for the forms necessary in making application for admission. There are three of these: (1) the application and personnel record blank, (2) the report of the medical examination, and (3) the report from secondary school officials.
2. Send the personnel record to the College along with an application fee of \$10.00, payable to the Commonwealth of Pennsylvania. This fee is not refundable. Have the examining physician send the medical examination record to the College. The secondary school record will be sent directly to the College by the principal or other official of the secondary school.
3. Have a personal interview with an official of the college. The Admissions Office of the College is open between the hours of 9:00 A.M. and 4:00 P.M., Monday through Friday, and from 9:00 A.M. until 12:00 Noon on Saturday.
4. Have the College Entrance Examination Board send your Scholastic Aptitude Test scores. All liberal arts applicants who have taken a language in high school and all secondary education applicants who intend to major in a foreign language must arrange to take the achievement test in the language of their choice administered by the College En-

trance Examination Board. These tests are required for admission. Arrangements to take them may be made through the high school counselor.

5. Clarion State College applicants may ask for a decision as early as July 1 following their Junior year. This would require the applicant to have taken the Scholastic Aptitude Test in the Junior year.
6. A registration fee of \$25.00 must be paid when the applicant receives notice of approval of his application for admission.

## WITHDRAWALS

All class withdrawals must be made through the office of the Dean of Academic Affairs. Classes from which a student withdraws during the first two weeks of a semester will not appear on his record. Withdrawals between the end of the second and sixth weeks may be made without penalty. After the beginning of the seventh week of a semester or during the second half of a summer session, a course from which a student withdraws and in which a grade of "E" is reported at the time of withdrawal shall be finally reported as a failure. If a withdrawal is not made through regular channels a failing grade will be entered for that course.

Voluntary withdrawals from individual classes after the ninth week of a semester will result in an automatic "E" for the course. Exceptions will be made for extenuating circumstances such as absence due to illness or some other emergency.

Any student who withdraws from the college either during or at the end of a semester must notify the Dean of Academic Affairs of his intention to withdraw and the reason for withdrawal. This is necessary for completion of the student's permanent record. Failure to comply with this regulation will constitute an unofficial withdrawal and may affect the student's chances of future readmission or his obtaining an honorable dismissal.

## SCHOLARSHIP REQUIREMENTS

Student progress is reported twice each semester. At the end of the first six weeks, each staff member submits to the Registrar a report of all students doing unsatisfactory work in his classes. These reports are recorded and then passed on to the advisers who give them to the students. The advisers take this opportunity to analyze with the students any problems they may have and to help them improve their study habits or correct other difficulties which may have contributed to their low scholarship.

## Grading System

- A indicates superior attainment.
- B indicates attainment above average.
- C indicates average attainment.
- D indicates attainment below average.
- E indicates failure.
- Inc indicates incomplete work.
- W indicates withdrawal from a course.

Inc (Incomplete) is not used unless a student has been in attendance through a semester or session. It indicates that the work of a student is incomplete and that the final grade is being withheld until the student fulfills all of the requirements of the course. It is used only when conditions and circumstances warrant and when evidence is presented to justify its being given.

All incomplete grades must be removed by the end of the following semester or they become failures.

## Scholarship Requirements

Students whose failures in any semester or year amount to six or more semester hours shall not take all the regular work of the following semester or year. It is recommended that such students attend summer sessions to make up deficiencies.

A student shall be placed on academic probation to take effect the first semester following a semester during which his average is less than "C." If in the course of a probationary semester a student achieves a semester average of "C" or greater, but does not achieve a cumulative average of "C" or greater, he shall be continued on probationary status for an additional semester. If during a probationary semester a student fails to achieve a semester average of "C" or greater, he may be suspended for one full semester, the suspension to take effect the next following semester. Students who are placed on academic probation or suspension will be informed that a written report of their academic status will be forwarded to their parents or guardian, wife or husband, as the case may be.

Students shall not be assigned to student teaching unless they have a grade of "C" or better in English I and II, nor shall students whose recorded or reported failures amount to six or more semester hours in a field of concentration or in required general or professional education be assigned to such teaching. No student shall be assigned to student teaching unless he has a "C" average in his first and second fields and a cumulative average of "C" in all academic work.

Quality points will be assigned as follows: Grade A, 4 quality points per semester hour; B, 3 quality points per semester hour; C, 2 quality points per semester hour; D, 1 quality point; E, 0 quality points.

To qualify for graduation, students in both Teacher Education and Liberal Arts must have a "C" average.

A Junior Standing Program has been established to provide the student an opportunity to evaluate his educational progress and to determine whether he may reasonably be expected to complete his teacher education satisfactorily and be recommended for a teaching certificate.

Near the end of the sophomore year, a careful study is made of each student's academic record, physical condition, and adviser's report. Students who do not meet the standards at the end of the fourth semester are allowed two semesters and a summer to make up deficiencies.

## FEES

(Subject to Change Without Notice)

Summary of approximate costs per academic year (September to May) for Pennsylvania resident students.\*

	Elem. & Secondary	Library Science	Liberal Arts
Basic Fee .....	\$250	\$250	\$300
Activity Fee .....	50	50	50
Est. Cost—books & supplies .....	100	100	100
Room, Board & Linen Service ....	612	612	612
Special .....		18	
	<hr/>	<hr/>	<hr/>
	\$1,012	\$1,030	\$1,062

\* Commuting students pay the same costs except the item for room, board, and linen service.

### I. Activity Fee

This fee, collected from all regularly enrolled students, will be administered through a student organization approved by the Board of Trustees. It covers the cost of athletic entertainment, publications, etc. Students taking fewer than twelve semester hours may take advantage of the program by paying this fee. The fee, determined and collected by the Clarion Students' Association, is \$25.00 each semester. Student Activity Fees for Summer Sessions are as follows: Pre-Session \$3.00; Regular Session \$6.00; Post Session \$3.00. The Activity Fee must be paid at the time of registration. ACTIVITY FEES ARE NOT REFUNDABLE UPON WITHDRAWAL OF THE STUDENT FOR ANY REASON. Checks covering activities fees must be made payable to CLARION STUDENTS' ASSOCIATION.

**II. Basic Fee**

A. **Basic Fees for residents of Pennsylvania**, amounting to \$250.00 for Teacher Education students and \$300.00 for Liberal Arts students (\$125.00 and \$150.00 respectively per eighteen-week semester) shall be charged to cover registration and keeping of records of students, library, students' health service (other than extra nurse and quarantine), and laboratory facilities. Checks in these amounts must be made payable to the COMMONWEALTH OF PENNSYLVANIA. Basic Fees for ten (10) or fewer semester hours of credit during a semester are as follows:

\$12.50 per hour for Teacher Education  
\$15.00 per hour for Liberal Arts  
\$20.00 per hour for Out-of-State Students

For the summer sessions, Basic Fees are determined by the semester hour rates indicated above, with a minimum fee during any session of \$37.50 for Teacher Education, \$45.00 for Liberal Arts, and \$60.00 for Out-of-State students.

B. **Students in the Library Science curriculum** are required to pay an additional fee of \$9.00 per semester to cover the cost of materials, supplies, equipment, and special services. For the six weeks summer session, this fee will be \$3.00. For part-time students in Library Science, this contingent fee for the special curriculum will be \$.50 per semester hour load.

C. **Fees for Out-of-State Students**. Students whose legal residence is out of the State of Pennsylvania pay \$20.00 per semester hour. The amounts for the Activity Fee, Room and Board charges, and costs of books and supplies are the same as for students who are Commonwealth residents. Students who enter the college from an out-of-state address will generally continue to be classified as Non-Pennsylvania residents for fee purposes during their four years of college. An exception is made if the student's parents establish legal residence in the Commonwealth. The establishment by the student of a Pennsylvania mailing address does not change the student's out-of-state status for fee purposes so long as his parents continue to reside out-of-state. The establishment by the student of a residence with a Pennsylvania resident who is a relative does not change the student's out-of-state status for fee purposes, unless that relative legally adopts the student.

**D. Part-Time and Summer School Fees.**

For Pennsylvania residents: \$12.50 per semester hour (minimum fee \$37.50) for teacher education; \$15.00 per semester hour (minimum fee \$45.00) for Liberal Arts.

For Out-of-State students: \$20.00 per semester hour (minimum fee: \$60.00).

Activity fees for all students are \$6.00 per six week session and \$3.00 per three week session.

Board, room and linen service is \$102.00 per six week session and \$51.00 per three week session.

Books and supplies are estimated at \$16.00 per six week session and \$8.00 per three week session.

**III. Housing Fees**

- A. For board, furnished room, heat, light, and limited laundry the charge will be \$612.00 for the academic year. No reduction shall be allowed for absences from the college.
- B. For damage, breakage, loss, or delayed return of college property the charges shall be equal to the extent of the loss.
- C. The rental contract for college residence halls shall be for the academic year, mid-term graduates or student teachers excluded.
- D. For students rooming off campus in private homes or off-campus residence halls and boarding in the college dining room, board shall be \$162.00 per semester and \$9.00 per week during the summer sessions.
- E. Cost of meals for transients: breakfast, 60¢; lunch, 85¢; dinner, \$1.25.
- F. Transient lodging fee: \$1.50 plus tax per night per person.

**IV. Miscellaneous Fees**

- A. **Deposits.** Students who plan to return to college in September must reserve a place at the college by pre-paying the Student Activity Fee of \$25.00 not later than April 20. Check or money order should be payable to Clarion Students' Association. The student's name should be printed in the lower left corner of the check or money order. We cannot accept cash.  
Residence Hall students are required to make a non-refundable deposit of \$72.00 to reserve a room for the fall semester. Check or money order is to be payable to Commonwealth of Pennsylvania. Send check or money order to the Business Manager, Clarion State College.

Application for admission as either freshman or transfer student must be accompanied by a \$10.00 fee to cover the cost of processing, interviewing, and admission. This fee will not be credited to the student's account as a part payment of basic, housing, or other fees. An additional fee of \$25.00 (effective September 1, 1967) must be paid upon receipt of notice of approval of the application. This \$25.00 fee is not refundable but will be applied to the student's basic fee. Checks or money orders for these amounts must be drawn to the Commonwealth of Pennsylvania.

- B. **Diploma Fee.** A fee of \$5.00 is paid by each degree candidate to cover the cost of executing his diploma.
- C. **Late Registration Fee.** Each student registering after the date officially set for registration may be required to pay a late registration charge of \$10.00. The same regulation shall apply to students who do not complete registration on assigned days. When permission for late registration has been secured from the Business Manager because of illness or any other avoidable cause, this fee may be waived. Registration is not complete until all fees are paid.
- D. **Medical Service Fees.** A charge of \$1.00 shall be assessed to a boarding student for each day beyond three days he is a patient in the infirmary during any one academic year. An additional charge of \$3.00 per day will be assessed to non-boarding students to cover the cost of meals while the student is in the infirmary. Students will be charged for any medicines not stocked by the infirmary. They have the privilege of employing their own physician at personal expense if they desire. If in the case of a serious illness or injury the college physician or nurse believes that transportation is necessary to the infirmary or to a local or home hospital, such transportation will be provided by ambulance, but the expense must be borne by the student.
- E. **Schedule Change Fee.** Effective September 1, 1967, a student requesting a change of course or courses after the date officially set for registration may be required to pay a change of registration fee of \$10.00.
- F. **Transcript Fee.** One copy of a transcript of credits earned at Clarion State College will be issued free of charge. A charge of \$1.00 is made for each subsequent transcript. Persons desiring to have their credits transferred to another institution should give the name and address of such institution. Transcripts will not be issued to anyone who has unpaid bills, library fines, or damage fees on his account.

**V. Payments of Fees**

All fees must be paid in advance and no student against whom there are any unpaid charges shall be allowed to enroll, graduate, or receive a transcript of record.

**VI. Repayments**

Repayments will be made when a student withdraws because of personal illness, certified by an attending physician, or because of such other reasons as may be approved by the Board of Trustees. Repayments may include the amount of the contingent and housing fees paid by the student for that part of the semester which the student does not spend in the college. Repayments to students who are temporarily suspended, indefinitely suspended, dismissed, or who voluntarily withdraw from the college are governed by the following regulations:

Basic fees, housing fees, special curriculum charges, and activity fees **will not be refunded for the semester involved.**

A portion of the dining fee may be refunded when a student withdraws.

Refunds will not be made unless the student withdraws from school.

Students who start boarding will not be permitted to withdraw from the dining room during the semester unless they leave school.

All requests for refunds shall be submitted in writing to the Business Manager of the college.

Students desiring to withdraw from school must report to the Dean of Academic Affairs, Registrar, Business Office, Loan Office, and Campus Bookstore to settle all unpaid accounts.

## PAYMENT OF FEES

All basic fees, special fees, housing fees, dining privileges and activity fees are due and payable on a full semester basis upon registration.

### FEE CHARGES PER SEMESTER

(Does not include Activity Fee)

	Elementary- Secondary	Library Science	Liberal Arts
<b>Commuting Students</b>			
Basic .....	\$125.00	\$125.00	\$150.00
Special .....		9.00	
Total .....	<u>\$125.00</u>	<u>\$134.00</u>	<u>\$150.00</u>
<b>Resident Students</b>			
Basic .....	\$125.00	\$125.00	\$150.00
Special .....		9.00	
Room, Board & Laundry	306.00	306.00	306.00
Total .....	<u>\$431.00</u>	<u>\$440.00</u>	<u>\$456.00</u>
<b>Boarding Students Only</b>			
Basic .....	\$125.00	\$125.00	\$150.00
Special .....		9.00	
Meals .....	162.00	162.00	162.00
Total .....	<u>\$287.00</u>	<u>\$296.00</u>	<u>\$312.00</u>
<b>Rooming Students Only</b>			
Basic .....	\$125.00	\$125.00	\$150.00
Special .....		9.00	
Room .....	144.00	144.00	144.00
Total .....	<u>\$269.00</u>	<u>\$278.00</u>	<u>\$294.00</u>

## FINANCIAL AID SERVICES

### Scholarships

**State Scholarships.** Holders of the State Scholarships may attend Clarion. These scholarships are obtained by taking competitive examinations in the senior year in high school. The examinations are administered by County Superintendents of Schools.

**H. W. Colegrove Scholarship Awards.** A trust fund established at the First National Bank of Port Allegany by Mr. H. W. Colegrove provides for two scholarships of \$100 each per year to be awarded to students from McKean County (Port Allegany section).

**H. W. Colegrove Scholarship Loan Fund Trust.** The will of Mr. Colegrove provides that the First National Bank of Port Allegany may make loans from his trust fund up to \$200 in any one year, and not more than \$500 to any one student, at the rate of 2% interest per annum while the borrower is attending school and 4% per annum after leaving school.

**The Wallace S. Girling Scholarship Fund.** Mr. Wallace S. Girling has established a loan fund to be administered by a committee consisting of two faculty members and two lay members. It is the responsibility of the Committee to screen applicants and grant loans to deserving students.

**The Marion Renn Marshall Memorial Fund.** This fund is to provide \$100 each academic year for the NDEA loan fund and also to support individual students in Speech Pathology and Audiology who need financial aid to participate in a project which will supplement their regular studies and provide a deeper understanding of their professional field.

**Elvira C. Moyer Scholarship Fund.** A scholarship of \$130 a year established by Anna B. Lilly will be awarded annually to a student of the college selected by ballot by the teachers of the college.

**Hannah Kent Schoff Memorial Scholarship.** The Pennsylvania Congress of Parents and Teachers, through the Hannah Kent Schoff Memorial Scholarship Fund, is presenting 2 four-year scholarships valued at \$150 each per year or a four-year value of \$600 to each of the 14 State Colleges in Pennsylvania each year beginning September 1959. The Scholarship Committee of each State College will select the candidate for the scholarship assigned to its college upon the basis of ability, achievement, citizenship, need, and interest in preparing for the teaching profession. Those wishing to apply for the scholarship must already have been accepted by the college. Scholarship applications must be made before March 1.

**Oil City Lions Club Scholarship.** This is an annual scholarship fund of \$250 available to a selected student from any Oil City high school or the Cranberry Area High School for use at the Venango Campus of Clarion State College. Details concerning application may be obtained from high school guidance counselors or from the Secretary of the Oil City Lions Club.

**Oil City Adelphoi Club Scholarship.** This is an annual scholarship of \$250 available to a selected student from any Oil City high school entering the Venango Campus of Clarion State College. Details concerning application may be obtained from high school guidance counselors or from the Secretary of the Adelphoi Club of Oil City.

**The Theta Xi Foundation Scholarship.** The Theta Xi Foundation of Pittsburgh has established a scholarship for four students which pays full tuition and fees for one semester. At least two of the grants must be made to a member of Theta Xi Fraternity; the others are open to any student in good standing at the College.

#### **Loans**

**National Defense Student Loan Program.** The National Defense Student Loan Program was authorized by the enactment of Public Law 85-864, the National Defense Education Act of 1958.

A borrower must be a full-time student in need of funds and must be capable of maintaining good academic standing.

Students, including freshmen, may borrow for college expenses in one academic year a sum not exceeding \$1000 and during his entire course in higher education, a sum not exceeding \$5000. The borrower must sign a note for his loan. Repayment of the loan is to be completed within a 10-year period, this period to begin one year after the borrower ceases to be a full-time student. No interest on the student loan may accrue prior to the beginning of the repayment schedule, and interest thereafter is to be paid at the rate of three per cent per year. The borrower's obligation to repay his loan is to be cancelled in the event of his death or permanent and total disability. The act further provides that up to 50 per cent of the loan (plus interest) may be cancelled if the borrower becomes a full-time teacher in a public elementary or secondary school. The cancellation of the loan is to be at the rate of 10 per cent per year up to five years. Applications should be submitted to the Director of Admissions. The applicant must file a Parents' Confidential Statement when applying for an NDEA loan.

National Defense Education Act funds of \$200,000.00 were available for the 1965-66 school year. Ten per cent of this amount (\$20,000.00) was raised by contributors as a base for the NDEA grant.

Alumni and friends of the college have been most generous in their support of this project. The Classes of 1910 and 1911 and many organizations and individuals have contributed to make a grand total of \$420,000 available in government and matching funds in the past five years. In each case the sum contributed was multiplied ten times and the resulting sum was then available to students who needed loans.

Organizations and individuals making contributions of one hundred dollars or more between April 1, 1965 and April 1, 1966, are listed below.

Allegheny Ludlum Steel Corp.	\$1,400.00
Allegheny Township Jr. Women's Club	100.00
Automatic Canteen Company	100.00
Coca Cola Company	100.00
Johnny Garneau's Restaurants, Inc.	100.00
Wallace S. Girling	3,000.00
Dr. David A. Hilton	100.00
New Bethlehem Bank	2,000.00
Northwest Pennsylvania Bank & Trust Company	1,000.00
Penn Traffic Company	100.00
Quota Club of Sharon	300.00
Laura M. Smedly Trust Fund	
First Seneca Bank & Trust Co., Trustee	2,500.00

**Pennsylvania Higher Education Assistance.** The Pennsylvania Higher Education Assistance Agency will assist a resident of Pennsylvania to obtain a loan from a lending institution. Freshmen as well as upperclassmen are eligible for this loan. The maximum loan is \$1000 per academic year. A borrower is required to pay 5% interest while using the loan and must begin payment on the principal when he graduates or withdraws from college. Repayment may be extended over a five-year period at the 5% interest rate. Application forms may be obtained at local banks throughout the Commonwealth.

**Alumni Loan Fund.** The Alumni Association is sponsoring a permanent fund to be known as the Clarion State College Student Loan Fund. It has empowered the First Seneca Bank and Trust Company of Clarion to place this fund on interest and to make loans from it according to recommendations by a committee, consisting of the President of the Board of Trustees, the President of the College, a member of the college faculty, and two alumni of the College. The Committee has passed the following regulations: No more than \$300 shall be loaned to any student during the four years. Interest shall be 4 per cent from the date of graduation or from the date the student leaves school. Students obtaining loans must have a scholastic average of at least "C."

Former loan funds established by the following benefactors have been included in the general Alumni Loan Fund: Clarion County Chapter of the D.A.R., The Lorena Given Memorial Fund, The J. George Becht Memorial Fund, the 1913 Class Loan Fund, The A. J. Davis Loan Fund, The R. H. Duntley Memorial Loan Fund, and the Christine A. Dickinson Memorial Loan Fund.

**The Frank L. Harvey Student Loan Fund.** Loans from this fund, which totals \$1,000, will be made in terms of the following criteria: (1) The real need for such a loan, (2) the love of children and young people, (3) a modicum of ability, (4) an understanding heart, (5) a sense of responsibility.

**The Mary Ann Trance Loan Fund** in the amount of \$200 was established as a memorial to the late Mary Ann Trance, a student at Clarion State College, by her college friends and her mother, Mrs. Frank J. Trance. The fund is for senior women.

### Employment

The college desires to encourage self-supporting students, but it cannot promise sufficient work to any student to defray his full expenses. A limited number of part-time positions are available, chiefly to upperclassmen who have demonstrated ability to do satisfactory college work. A limited number of positions are available to new students; however, freshmen should plan to devote their full attention to adjustment to college life and academic requirements if at all possible.

Applications for part-time employment may be obtained from the Office of the Dean of Students.

In addition to the use of college funds for campus employment, Clarion State College participates actively in the College Work-Study Program sponsored by the Federal Government under the Department of Health, Education, and Welfare. Under this program, qualified students may be employed full-time during vacation periods as well as part-time during the academic year.

### DEGREE PROGRAMS

Clarion State College offers combined academic and professional education curricula leading to the degree of Bachelor of Science with certification for teaching in the public elementary and secondary schools of the Commonwealth of Pennsylvania and curricula in the liberal arts and sciences for those seeking the Bachelor of Arts degree.

Students working toward the Bachelor of Science degree may choose among curricula leading to certification in Elementary Education, Library Science, Public School Nursing,

and Secondary Education. The area of Secondary Education offers fields of concentration in chemistry, comprehensive science, earth and space science, English, French, geography, German, history, mathematics, physics, Russian, social studies, Spanish, and speech.

Any student who earns certification in Elementary Education, Library Science, or Secondary Education may also include in his program a course of study that will extend his certification to include Safe Driving and General Safety Education or either of two areas of Special Education, Teaching the Mentally Retarded or Speech Correctionist.

Students in the liberal arts and sciences may choose among three broad areas of study, each of which offers a variety of fields for major specialization. The three major areas and the fields of specialization within them are listed below:

### **Humanities**

Fields of specialization: foreign language, literature, music, philosophy, speech, and theater arts.

### **Natural Sciences and Mathematics**

Fields of specialization: biology, chemistry, physical geography, mathematics, and physics.

### **Social Sciences**

Fields of specialization: economics, geography, history, political science, psychology, and sociology-anthropology.

# TEACHER EDUCATION

## OBJECTIVES OF THE TEACHER EDUCATION PROGRAM

Clarion State College is officially maintained for the education and preparation of teachers for the public schools of Pennsylvania and for education in the arts and sciences.

Five curricula of specialized type are offered in professional education: library science; elementary education; secondary education; special education; and public school nursing.

Teacher preparation requires a program through which college graduates come to perform the offices of private person and public teacher in accord with qualities of good citizenship.

Therefore, each curriculum includes required studies in English expression, social studies, literature, fine arts, and science, all of which express our social heritage and convey customs and practices of a democratic kind.

Professional preparation in each curriculum is based upon adequate mastery of subject matter to give proficiency in teaching and upon adequate knowledge of psychology and philosophy to enable teachers to interest and instruct pupils.

### Special Objectives:

1. To develop an understanding and appreciation of American democracy and the function of the public school in a democratic society.
2. To develop respect for the rights, responsibilities, and welfare of others.
3. To emphasize the moral, spiritual, and aesthetic values which will strengthen the individual in his personal and professional life.
4. To guide students so as to encourage them to enter the profession and continue in it.
5. To promote an understanding of children and youth in relation to their individual differences, the nature of the learning process, developmental behavior, and the interaction of the individual with the group.
6. To ensure the student's ability to read, write, and speak effectively.
7. To promote use of reflective thinking in problem solving.
8. To ensure that the student is capable of developing the scope and sequence of the courses of study within his areas of certification.

9. To provide college classroom instruction which is designed to help prospective teachers develop methodology for their own classrooms.
10. To encourage students to practice recreational activities, both physical and mental, for wholesome enjoyment of leisure time now and in later life.

Students who enroll in one of the Teacher Education Curricula may earn the degree of Bachelor of Science in Education with certification for library science, for teaching on the elementary or secondary level, or for public school nursing. Students may choose from the following curricula, all of which lead to the Bachelor of Science degree:

**Curriculum in Elementary Education** to prepare for teaching in the kindergarten, primary, and intermediate grades.

**Curriculum in Secondary Education** to prepare for teaching in junior and senior high schools.

**Curriculum in Library Science Education** to prepare for certification as school librarian.

**Degree Curriculum in Public School Nursing** to prepare registered nurses for certification as public school nurses.

A student who is enrolled in the Elementary, Secondary, or Library Science curricula may also take courses which will lead to certification in Safety Education or one of two fields of Special Education: Teaching of the Mentally Retarded or Speech Correctionist. Elementary certificates may be endorsed for elementary library science upon completion of 12 semester hours in the field.

## CERTIFICATION

### The Provisional College Certificate

Students who complete one of the teacher education curricula of the Clarion State College and who are awarded a baccalaureate degree are granted the Pennsylvania Provisional College Certificate, valid for three years of teaching in the schools of the Commonwealth. Application for the certificate must be made and the certificate issued before graduates may teach in the public schools of Pennsylvania.

### The Permanent College Certificate

The Permanent College Certificate requires three full years of successful teaching experience on the Provisional College Certificate in the public schools of this Commonwealth and the satisfactory completion of twenty-four (24) semester hours of post-baccalaureate education. Certificates issued prior to October 1, 1963, will continue to require twelve (12) semester hours of post-baccalaureate education for permanent validation. All permanent certificates require a basic course in the

History of United States and Pennsylvania and a basic course in visual aids and sensory techniques.

### **Extension of Certificates**

A certificate valid for the secondary school may be extended to include the elementary field on the completion of twenty-four semester hours of approved courses in the field of elementary education.

A certificate valid for the elementary school may be extended to include secondary subjects upon the completion of eighteen (18) to forty-six (46) semester hours of approved courses in a secondary subject, depending upon the area of specialization.

The holder of a certificate valid for the elementary school may have an endorsement of Library Science upon the completion of twelve (12) semester hours of approved courses in this field. This endorsement is valid only for the elementary school library.

The holder of a certificate valid for elementary education may have an endorsement of modern foreign language upon completion of six (6) semester hours in this field of study based upon practical techniques of speaking the language(s) with acceptable accent. The six (6) hours of study must rest upon adequate preparation in the language(s) as determined by the college.

A certificate for secondary English will be extended to include reading when an applicant has completed a minimum of six semester hours in developmental and remedial reading. Education 333 is suggested as the basic course with Education 221, 425, and 426 as optional electives.

### **Evaluation of Credits**

Evaluations of the credits for students are considered valid only for the year in which distributions are made (year in which credits are earned). This situation exists because of changes in regulations governing the value of credits and in the requirements for certification and graduation frequently made by the State Department of Public Instruction, the State Board of Education, and the Board of Presidents of the State Colleges. Students are urged to keep themselves well informed about their distributions by occasional inquiries at the General Office at times other than registration periods.

## **REQUIREMENTS**

### **General Education**

By regulation of the Pennsylvania State Council of Education, effective October 1, 1963, all applicants for certification

to teach in the Commonwealth must have completed a minimum of sixty semester hours of acceptable courses in General Education. Students in all curricula will follow the same program. Deviation from the program is permitted for those who specialize in Science or Mathematics. Specialized courses in these fields may be substituted for the general requirements in science or mathematics.

Required courses in General Education are specified in the section headed "General Education—All Curricula."

### **Professional Education**

Candidates for certification in elementary education must complete the Professional Education courses specified on page 46. Candidates for secondary certification are required to complete the Professional Education courses listed on page 47.

### **Areas of Specialization**

Secondary majors must complete the requirements for a field of certification as outlined in the section entitled Course Distributions and, unless otherwise specified, minimum requirements for certification in a second field. It should be noted that methods courses can not be counted toward completion of an academic requirement.

Library Science majors will complete requirements for Library Science Certification and also the minimum requirements for certification in an additional field.

Elementary majors, in addition to completing the requirements for elementary certification, must take an academic concentration of 18 to 24 semester hours, of which 15 hours may be considered as part of general education. The academic major may be in a single subject such as history, in a broad field such as psychology or sociology, or in an interdisciplinary area such as the humanities, the social sciences, or the natural sciences. The requirement for the academic major may also be satisfied by an 18 to 24 hour concentration in a field of interest, such as Art, Library Science, Music, or Special Education.

### **Student Teaching**

Those who major in secondary education are assigned to student teaching during either the seventh or eighth semester. Each secondary major will receive an assignment for a full day of student teaching throughout one semester at one of the public school student teaching centers cooperating with the college.

Secondary students majoring in Library Science are assigned to student teaching during either the seventh or eighth semesters. Two major assignments are required: the equivalent of one half time in public school library practice and the equi-

valent of one half time in classroom academic teaching at one of the public school teaching centers cooperating with the college.

Those who major in elementary education are assigned to student teaching during either the seventh or eighth semester. Each elementary major will receive an assignment for a full day of student teaching throughout one semester at the Campus Training School or at one of the public school elementary student teaching centers associated with the college.

Student teachers are encouraged to reside throughout the semester in the community in which their student teaching center is located.

All student teaching assignments follow the public school calendar rather than the college calendar each semester.

The final grade in student teaching will be recommended by the cooperating teacher in consultation with the College supervisor and will be finally approved and reported by the College supervisor.

Student teachers must meet college requirements prior to assignment.

## PUBLIC SCHOOL STUDENT TEACHING CENTERS

Allegheny-Clarion Valley Joint Schools, Foxburg, Pennsylvania  
Baden-Economy School District, Freedom, Pennsylvania  
Beaver Falls Area Schools, Beaver Falls, Pennsylvania  
Bradford Area Schools, Bradford, Pennsylvania  
Brockway Area Schools, Brockway, Pennsylvania  
Brokenstraw Valley Schools, Youngsville, Pennsylvania  
Brookville Area Schools, Brookville, Pennsylvania  
Burrell School District, Lower Burrell, Pennsylvania  
Butler Area Schools, Butler, Pennsylvania  
Chartiers Valley School District, Pittsburgh 20, Pennsylvania  
Clarion Area Schools, Clarion, Pennsylvania  
Clarion Limestone Area Schools, R. D. 1, Strattanville, Pennsylvania  
Clearfield Area Schools, Clearfield, Pennsylvania  
Cranberry Area Schools, Seneca, Pennsylvania  
Curwensville School District, Curwensville, Pennsylvania  
Dayton School District, Dayton, Pennsylvania  
DuBois Area Schools, DuBois, Pennsylvania  
East Brady Area Schools, East Brady, Pennsylvania  
East Forest School District, Marienville, Pennsylvania  
Fairview Township-Karns City School District, Karns City, Pennsylvania  
Ford City Union Schools, Ford City, Pennsylvania  
Franklin Area Schools, Franklin, Pennsylvania  
Franklin Area Schools, Murrysville, Pennsylvania

Freeport Area Schools, Freeport, Pennsylvania  
Greater Johnstown Public Schools, Johnstown, Pennsylvania  
Grove City Area Schools, Grove City, Pennsylvania  
Hempfield Area Schools, R. D. 6, Greensburg, Pennsylvania  
Highlands School District, Tarentum, Pennsylvania  
Johnsonburg Area Schools, Johnsonburg, Pennsylvania  
Kane Area Union Schools, Kane, Pennsylvania  
Keystone Area Schools, Knox, Pennsylvania  
Kiski Area Schools, R. D. 3, Leechburg, Pennsylvania  
Kittanning Area Schools, Kittanning, Pennsylvania  
New Castle Area Schools, New Castle, Pennsylvania  
New Kensington City Schools, New Kensington, Pennsylvania  
North Clarion County Schools, Leeper, Pennsylvania  
North Hills School District, Pittsburgh 29, Pennsylvania  
Northern Butler County Area Schools, R. D. 2, West Sunbury,  
Pennsylvania  
Oil City Area Schools, Oil City, Pennsylvania  
Penn Hills School District, Pittsburgh 35, Pennsylvania  
Pine-Richland School District, R. D. 1, Gibsonia, Pennsylvania  
Pittsburgh City Schools, Pittsburgh, Pennsylvania  
Plum Borough School District, R. D. 2, New Kensington, Penn-  
sylvania  
Punxsutawney Area Schools, Punxsutawney, Pennsylvania  
Redbank Valley Schools, New Bethlehem, Pennsylvania  
Ridgway Area Public Schools, Ridgway, Pennsylvania  
Shannock Valley Union Schools, Rural Valley, Pennsylvania  
Sharon City Schools, Sharon, Pennsylvania  
South Butler County Schools, Saxonburg, Pennsylvania  
St. Marys Area Schools, St. Marys, Pennsylvania  
Tidioute Area Schools, Tidioute, Pennsylvania  
Union Joint Schools, Ringersburg, Pennsylvania  
Valley Grove Schools, Rocky Grove, Franklin, Pennsylvania  
Warren Area Schools, Warren, Pennsylvania  
West Deer Township Schools, R. D. 1, Cheswick, Pennsylvania  
West Forest School District, Tionesta, Pennsylvania

**COURSE DISTRIBUTIONS  
GENERAL EDUCATION—ALL CURRICULA IN  
TEACHER EDUCATION**

			c.h.	s.h.
Eng.	111	Composition I .....	3	3
Eng.	112	Composition II .....	3	3
Sp.	113	Fundamentals of Speech .....	3	3
Mus.	111	Introduction to Music .....	3	3
Art	111	The Visual Arts .....	3	3
Eng.	213	Introduction to Literature .....	3	3
Phil.	211	Introduction to Philosophy .....	3	3
Hist.	112	History of Modern Civilization .....	3	3
Hist.	212	Hist. of U.S. and Pa.—since 1865 (or)	3	(3)
Hist.	213	History of the U.S. and Pa. ....	3	3
P.S.	211	American Government .....	3	3
Anth.	211	Anthropology (or) .....	3	(3)
Soc.	211	Principles of Sociology (or) .....	3	(3)
Econ.	211	Principles of Economics .....	3	3
Biol.	111	Basic Biological Science .....	4	4
Ph. Sci.	111	Basic Physical Science I .....	3	3
Ph. Sci.	112	Basic Physical Science II .....	3	3
Math.	111	Basic Mathematics .....	3	3
Geog.	111	Physical Geography .....	3	3
Geog.	257	Geog. of U.S. and Canada (or) .....	3	(3)
Geog.	254	Conserv. of Natural Resources .....	3	3
Psy.	211	General Psychology .....	3	3
HPE	111	Health Education .....	2	2
HPE	112,			
	211, 212	Physical Education for men (or) ....		
HPE	121,			
	221, 321, 421	for women; three semesters .....	2	1

Note: Elementary majors should schedule HPE 223 as a substitute for one of the above courses in Physical Education. Elementary majors must substitute Music 131 for Music 111. They may schedule Music 111 as an elective.

Social Studies or History majors should schedule Hist. 212. Elementary majors should schedule Hist. 213. Secondary majors other than those in Social Studies and History may schedule Hist. 213 instead of Hist. 212.

All students may substitute more advanced courses in biology, physics, and mathematics for Biology 111, Physical Science 111 and 112, and Mathematics 111.

**PROFESSIONAL EDUCATION—ELEMENTARY**

(Required of all Elementary majors)

			c.h.	s.h.
Ed.	223	Social Foundations of Education ..	3	3
Psy.	320	Human Growth and Development ..	5	5
Ed.	329	Audio-Visual Education .....	3	2
El. Ed.	323	Teaching of Reading .....	3	3
El. Ed.	324	Teaching of Arithmetic .....	3	3
Sci.	222	Teaching Science in Elementary Grades .....	2	2
Art	222	Teaching Art in Elementary Grades	3	2
Mus.	132	Literature and Materials of Music IIE .....	3	3
El. Ed.	325	Modern Curriculum and Methods ..	5	5
El. Ed.	422	Professional Practicum and School Law .....	2	2
El. Ed.	424	Student Teaching .....	30	12

**THE CURRICULUM IN ELEMENTARY EDUCATION**(Sequence of courses  
subject to change for administrative reasons.)

1st Semester					2nd Semester				
Eng.	111:	Composition I .....	3		Eng.	112:	Composition II .....		3
Ph.Sci.	111:	Basic 1 .....	3		Ph.Sci.	112:	Basic II .....		3
Hist.	213:	U.S. & Pa. ....	3		Art	011:	Fundamentals .....	2- 1	
Math.	111:	Basic Elem. ....	3		Biol.	111:	Basic .....		4
Geog.	111:	Physical .....	3		Sp.	113:	Fundamentals .....		3
HPE	112:	Physical Education ... 2- 1			HPE	111:	Health .....		2
				17-16					17-16
3rd Semester					4th Semester				
Eng.	213:	Intro. to Lit. ....	3		Ed.	223:	Social Foundations ....		3
Psy.	211:	General .....	3		Art	111:	Visual Arts .....		3
Mus.	131:	Lit. & Mat. I .....	3		Hist.	112:	Modern Civ. ....		3
Art	231:	Studio Exp. .... 3- 2			Mus.	132:	Lit. & Mat. II .....		3
HPE	211:	Physical Education ... 2- 1			Art	222:	Teach. Art Elem. Gr. .... 3- 2		
		Elective .....	3		HPE	223:	Physical Education .... 2- 1		
				17-15					20-18
5th Semester					6th Semester				
Psy.	220:	Human Growth & Dev. ....	5		El.Ed.	325:	Mod. Curr. & Meth. ....		5
El.Ed.	324:	Teach. of Arith. ....	3		El.Ed.	323:	Teach. of Reading ....		3
Eng.	331:	Child. Lit. ....	3		Geog.	257 or 254:	U.S. & Can. or Cons. ....		3
Sci.	231:	Fused .....	2		Sci.	222:	Teach. Sci. Elem. Gr. .... 2		
		Elective .....	3				Elective .....		3
				16-16					16-16
7th Semester (or 8th)					8th Semester (or 7th)				
P.S.	211:	American Gov. ....	3		El.Ed.	424:	Student Teach. ....	30-12	
Phil.	211:	Introduction .....	3		El.Ed.	422:	Prof. Pract. & Sch. Law 2- 2		
Soc.	211 or Econ.	211: Prin. ....	3						32-14
Ed.	329:	Audio-Visual .... 3- 2							
		Elective .....	6						
				18-17					

**PROFESSIONAL EDUCATION—SECONDARY**  
 (Required of all Secondary Education  
 and Library Science majors.)

			c.h.	s.h.
Psy.	222	Educational Psychology .....	3	3
Ed.	223	Social Foundations of Education ...	3	3
Ed.	310	Psychology of Reading Instruction ..	2	2
Psy.	321	Psychology of Adolescence .....	2	2
Ed.	321	Select course in Methods and Eval- to Ed.	uation in field of Specialization ..	3
Ed.	328			
Ed.	329	Audio-Visual Education .....	3	2
Ed.	422	Professional Practicum Including School Law .....	2	2
Ed.	423	Library Practice and Student Teaching (or)		
Ed.	424	Secondary Student Teaching .....	30	12

**THE CURRICULUM IN SECONDARY EDUCATION**  
 (Sequence of courses  
 subject to change for administrative reasons.)

	<b>1st Semester</b>			<b>2nd Semester</b>		
Eng.	111:	Composition I .....	3	Eng.	112:	Composition II .....
Geog.	111:	Physical .....	3	Sp.	113:	Fundamentals .....
Ph.Sci.	111:	Basic I .....	3	Ph.Sci.	112:	Basic II .....
Math.	111:	Basic .....	3	Hist.	112:	Modern Civ. ....
HPE	112:	Phys. Ed. ....	2- 1	Biol.	111:	Basic .....
HPE	111:	Health .....	2			
			<u>16-15</u>			<u>16-16</u>

	<b>3rd Semester</b>			<b>4th Semester</b>		
Psy.	211:	General .....	3	Eng.	213:	Intro'd'n to Literature ..
Art	111:	Visual Arts .....	3	Mus.	111:	Introduction .....
Econ.	211 or Soc. 211: Prin.	.....	3	Geog.	257 or 254: U.S. & Can. or Cons.	3
HPE	211:	Phys. Ed. ....	2- 1	Psy.	222:	Educational .....
		Elective .....	6	HPE	212:	Phys. Ed. ....
			<u>17-16</u>			<u>2- 1</u>

	<b>5th Semester</b>			<b>6th Semester</b>		
Hist.	212:	U.S. and Pa. Hist. ....	3	Ed.	329:	Audio-Visual Ed. ....
Phil.	211:	Introduction .....	3	Ed.	329:	Meth. in Academic Field .....
Ed.	310:	Psy. of Read. Inst. ....	2	Ed.	223:	Social Foundations ....
		Elective .....	9			Elective .....
			<u>17-17</u>			<u>9</u>

	<b>7th Semester (or 8th)</b>			<b>8th Semester (or 7th)</b>		
Psy.	321:	Adolescent .....	2	Ed.	422:	Prof. Pract. & Sch. Law .....
P.S.	211:	American Government .....	3	Ed.	424:	Student Teaching .....
		Elective .....	<u>12</u>			<u>30-12</u>
			<u>17-17</u>			<u>32-14</u>

**AREAS OF MAJOR SPECIALIZATION—SECONDARY  
THE FIELD OF BIOLOGY  
(48 Semester Hours)**

**Required:**

			c.h.	s.h.
Biol.	153	General Biology I .....	6	4
Biol.	154	General Biology II .....	6	4
Biol.	263	Zoology .....	6	4
Biol.	264	Botany .....	6	4
Chem.	153	General Chemistry I .....	6	4
Chem.	154	General Chemistry II .....	6	4
Chem.	251	Organic Chemistry .....	6	4
Chem.	353	Biochemistry .....	6	3
*Ph.	251	General Physics I .....	6	4
*Ph.	252	General Physics II .....	6	4

**Elective: (at least one course from each group)****Group I**

			c.h.	s.h.
Biol.	253	Ornithology .....	5	3
Biol.	254	Entomology .....	5	3
Biol.	255	Animal Ecology .....	5	3
Biol.	256	Field Zoology I .....	5	3
Biol.	257	Field Zoology II .....	5	3
Biol.	258	Conservation of Plant and Animal Resources .....	5	3
Biol.	351	Field Botany .....	5	3
Biol.	352	Plant Ecology .....	5	3
Biol.	357	Taxonomy of Vascular Plants .....	5	3

**Group II**

			c.h.	s.h.
Biol.	259	Physiology .....	5	3
Biol.	261	Vertebrate Embryology .....	5	3
Biol.	262	Histology .....	5	3
Biol.	265	Plant Physiology .....	5	3
Biol.	353	Comparative Vertebrate Anatomy ..	5	3
Biol.	354	Microbiology .....	5	3
Biol.	355	Parasitology .....	5	3
Biol.	356	Genetics .....	5	3
Biol.	360	Problems in Biology .....	5	3

No second field required.

\* For courses in the field of Biology marked with an asterisk, Mathematics 161: College Algebra and Trigonometry is a prerequisite. Mathematics 151 and 152 may be substituted for 161.

Biology majors should not schedule Biology 111, Mathematics 111, or Physical Science 111 and 112 in their General Education programs.

**THE FIELD OF CHEMISTRY**  
**(40 Semester Hours)**

<b>Required:</b>		c.h.	s.h.
Chem.	151	Inorganic Chemistry I .....	8      5
Chem.	152	Inorganic Chemistry II .....	8      5
Chem.	251	Organic Chemistry I .....	6      4
Chem.	252	Organic Chemistry II .....	6      4
Chem.	352	Quantitative Analysis .....	7      3
*Chem.	354	Physical Chemistry I .....	6      4
*Chem.	355	Physical Chemistry II .....	6      4
Chem.	457	Instrumental Analysis .....	5      3
Ph.	251	General Physics I .....	6      4
Ph.	252	General Physics II .....	6      4
<b>Elective:</b>		c.h.	s.h.
Chem.	255	Industrial Chemistry .....	5      3
Chem.	258	Laboratory Techniques in Chemistry .....	3      2
Chem.	451	Inorganic Synthesis .....	7      3
Chem.	453	Biochemistry .....	6      3
Chem.	454	Water Analysis .....	4      2
Chem.	456	Advanced Inorganic Chemistry I	5      4
Chem.	459	Demonstrations in Chemistry ....	5      3
Chem.	460	Radiation Techniques (arranged)	2-3
*Ph.	353	Atomic Physics .....	6      4

No second field required.

\* For course in the Field of Chemistry marked with an asterisk, Mathematics 351 is a prerequisite. Majors in the field should understand that Mathematics 351 must be preceded by Mathematics 151 and 152 or 161, and Mathematics 251 and 252.

Chemistry majors should not schedule Mathematics 111 or Physical Science 111 and 112 in their general education programs.

**THE FIELD OF COMPREHENSIVE SCIENCE**  
**(44 Semester Hours)**

<b>Required:</b>		c.h.	s.h.
Biol.	153	General Biology I .....	6      4
Biol.	154	General Biology II .....	6      4
Biol.	263	Zoology .....	6      4
Biol.	264	Botany .....	6      4
Chem.	153	General Chemistry I .....	6      4

Chem.	154	General Chemistry II .....	6	4
Geog.	353	Descriptive Astronomy .....	3	3
*Geog.	252	Geology .....	3	3
*Geog.	353	Geomorphology .....	3	3
*Geog.	351	Meteorology .....	3	3
*Geog.	352	Climatology .....	3	3
Ph.	251	General Physics I .....	6	4
Ph.	252	General Physics II .....	6	4
Math.	151	College Algebra .....	3	3
Math.	152	Trigonometry .....	3	3

No second field required.

Mathematics 161 may be substituted for Mathematics 151 and 152. Majors in Comprehensive Science should not include Biology 111, Mathematics 111, and Physical Science 111 and 112 in their general education programs.

\*One of these courses.

## THE FIELD OF COMPREHENSIVE EARTH AND SPACE SCIENCE (48 Semester Hours)

### Required:

			c.h.	s.h.
Geog.	111	Basic Physical Geography .....	3	3
Geog.	252	Geology .....	3	3
Geog.	258	Historical Geology .....	3	3
Geog.	351	Meteorology .....	3	3
Geog.	353	Descriptive Astronomy .....	3	3
		Physical Geography Electives .....	6	
		(See below) .....		21
Biol.	153	General Biology I .....	6	4
Biol.	154	General Biology II .....	6	4
Chem.	153	General Chemistry I .....	6	4
Chem.	154	General Chemistry II .....	6	4
Ph.	251	General Physics I .....	6	4
Ph.	252	General Physics II .....	6	4
		Science Elective .....	3-4	
				27-28
				48-49
Geog.	253	Geomorphology .....	3	3
Geog.	352	Climatology .....	3	3
Geog.	451	Cartography .....	5	3

Science Electives from Biology,  
Chemistry and Physics

No second field required.

Earth and Space Science majors will schedule Mathematics 161 instead of Mathematics 111 and will not schedule Biology 111 or Physical Science 111 and 112 in their general education programs.

Biology, Chemistry and Physics majors will receive provisional college certification in Earth and Space Science by taking 12 semester hours in Physical Geography, Geology, Meteorology, Astronomy.

## THE FIELD OF ENGLISH

### (36 Semester Hours)

<b>Required:</b>		c.h.	s.h.
Eng. 111	Composition I .....	3	3
Eng. 112	Composition II .....	3	3
Sp. 113	Fundamentals of Speech .....	3	3
Eng. 213	Introduction to Literature .....	3	3
Eng. 251	English Literature .....	3	3
Eng. 252	American Literature .....	3	3
Eng. 253	Philology and Grammar .....	3	3
Eng. 351	Advanced Composition .....	3	3
<b>Elective</b>		c.h.	s.h.
Eng. 254	American Prose .....	3	3
Eng. 255	Pre-Shakespearian Literature .....	3	3
Eng. 256	Seventeenth Century Literature .....	3	3
Eng. 257	Novel to 1870 .....	3	3
Eng. 258	Short Story .....	3	3
Eng. 259	Journalism .....	3	3
Eng. 331	Children's Literature .....	3	3
Eng. 352	American Poetry .....	3	3
Eng. 353	Shakespeare .....	3	3
Eng. 354	Eighteenth Century Literature .....	3	3
Eng. 355	Novel Since 1870 .....	3	3
Eng. 356	Romantic Literature .....	3	3
Eng. 451	Contemporary Poetry .....	3	3
Eng. 452	Modern Drama .....	3	3
Eng. 453	Chaucer .....	3	3
Eng. 454	Victorian Literature .....	3	3
Eng. 455	Criticism .....	3	3
Eng. 456	English Honors Seminar .....	3	3
Eng. 457	Linguistics .....	3	3
Eng. 458	History of the English Language .....	3	3
Eng. 459	Old English Language and Literature	3	3

No second field needed if 6 hrs. in Reading are scheduled in addition to 36 hours in English. The basic course is Education 333, to be followed by at least one elective chosen from Education 221, 425, or 426. Education 425 should not be sched-

uled unless student teaching has been completed. English majors with Reading minors are not required to take Education 310: Psychology of Reading Instruction.

### THE FIELD OF FRENCH

(24 Semester Hours, excluding French 151 & 152)

<b>Required:</b>		c.h.	s.h.
Fr.	251 Intermediate I .....	3	3
Fr.	252 Intermediate II .....	3	3
Fr.	255 French Civilization I .....	3	3
Fr.	256 French Civilization II .....	3	3
Fr.	351 Advanced Grammar & Composition	3	3
<b>Elective:</b>		c.h.	s.h.
Fr.	353 The Modern French Drama .....	3	3
Fr.	354 The Modern French Novel .....	3	3
Fr.	355 French Romanticism .....	3	3
Fr.	356 French Poetry from Baudelaire to Surrealism .....	3	3
Fr.	357 The French Realistic Novel .....	3	3
Fr.	358 The Literature of the Age of Enlightenment .....	3	3
Fr.	359 The Literature of the Classical Age ..	3	3
Fr.	451 Supervised Readings in French Literature .....	3	3

### THE FIELD OF GEOGRAPHY

(24 Semester Hours)

<b>Required:</b>		c.h.	s.h.
Geog.	111 Basic Physical Geography .....	3	3
Geog.	257 Geography of U. S. and Canada .....	3	3
<b>Elective: (at least one course from each group)</b>			
<b>Group I</b>		c.h.	s.h.
Geog.	252 Physical Geology .....	3	3
Geog.	258 Historical Geology .....	3	3
Geog.	253 Geomorphology .....	3	3
Geog.	351 Meteorology .....	3	3
Geog.	352 Climatology .....	3	3
Geog.	353 Descriptive Astronomy .....	3	3
Geog.	259 Map Interpretation .....	3	3
Geog.	451 Cartography .....	5	3
<b>Group II</b>		c.h.	s.h.
Geog.	251 Economic Geography .....	3	3
Geog.	254 Conservation of Natural Resources .....	3	3
Geog.	255 Trade and Transportation .....	3	3
Geog.	354 Historical Geography of the U. S. ....	3	3

**Group III**

			c.h.	s.h.
Geog.	256	Geography of Pennsylvania .....	3	3
Geog.	355	Geography of Soviet Union .....	3	3
Geog.	356	Geography of Europe .....	3	3
Geog.	357	Geography of Asia .....	3	3
Geog.	452	Geography of Latin America ..	3	3
Geog.	454	Geography of Africa and Australia ..	3	3
Geog.	453	World Problems in Geography .....	3	3

**THE FIELD OF GERMAN**

(24 Semester Hours, excluding German 151 &amp; 152)

**Required:**

			c.h.	s.h.
Ger.	251	Intermediate I .....	3	3
Ger.	252	Intermediate II .....	3	3
Ger.	255	Germanic Civilization I .....	3	3
Ger.	256	Germanic Civilization II .....	3	3
Ger.	351	Advanced Grammar & Composition..	3	3

**Elective:**

			c.h.	s.h.
Ger.	253	Scientific German .....	2	2
Ger.	352	Survey of German Literature through the Classical Age .....	3	3
Ger.	353	The Modern German Drama .....	3	3
Ger.	354	The Modern German Novel .....	3	3
Ger.	355	German Romanticism .....	3	3
Ger.	358	Classical German Literature: Goethe, Schiller & Lessing .....	3	3
Ger.	451	Supervised Readings in German Literature .....	3	3

**THE FIELD OF HISTORY**

(30 Semester Hours)

**Required:**

			c.h.	s.h.
Hist.	111	History of Ancient and Medieval Civilization .....	3	3
Hist.	112	History of Modern Civilization .....	3	3
Hist.	211	History of U. S. and Pa. to 1865 ..	3	3
Hist.	212	History of U. S. and Pa. since 1865 ..	3	3

Note: Hist. 111 and 112 are prerequisites for all World and European history courses, and 211 and 212 for American. Elementary majors should schedule Hist. 213: U.S. & Pa. History (Elem.).

**Electives:**

<b>Group I: United States History</b>		<b>c.h.</b>	<b>s.h.</b>
Hist.	354 Contemporary American History . . . . .	3	3
Hist.	355 Economic History of the U. S. . . . .	3	3
Hist.	359 History of the American Frontier . . . . .	3	3
Hist.	360 Colonial America . . . . .	3	3
Hist.	361 History of American Science and Technology . . . . .	3	3
Hist.	452 Diplomatic History of the U. S. . . . .	3	3
Hist.	456 Society and Thought in America to 1865 . . . . .	3	3
Hist.	457 Society and Thought in America since 1865 . . . . .	3	3
<b>Group II: European History</b>		<b>c.h.</b>	<b>s.h.</b>
Hist.	349 Ancient History . . . . .	3	3
Hist.	350 Medieval History . . . . .	3	3
Hist.	351 Renaissance and Reformation History . . . . .	3	3
Hist.	352 History of Europe from 1660 to 1814 .	3	3
Hist.	353 History of Europe from 1815 to 1924 .	3	3
Hist.	455 Culture of Europe (Educational Tour)		6
<b>Group III: Regional and World History</b>		<b>c.h.</b>	<b>s.h.</b>
Hist.	254 History of Latin America: Colonial Period . . . . .	3	3
Hist.	255 History of Latin America: National Period . . . . .	3	3
Hist.	256 History of Pennsylvania . . . . .	3	3
Hist.	257 History of the Near East . . . . .	3	3
Hist.	258 History of Asia—Ancient and Medieval . . . . .	3	3
Hist.	259 History of Asia—Modern . . . . .	3	3
Hist.	357 History of England to 1689 . . . . .	3	3
Hist.	358 History of England since 1689 . . . . .	3	3
Hist.	365 History of Russia . . . . .	3	3
Hist.	453 20th Century World History . . . . .	3	3
Hist.	454 The British Commonwealth of Nations . . . . .	3	3
Hist.	458 English Constitutional History . . . . .	3	3

## THE FIELD OF MATHEMATICS

**(24 Semester Hours)**

<b>Required:</b>		<b>c.h.</b>	<b>s.h.</b>
Math.	151 College Algebra . . . . .	3	3
Math.	152 College Trigonometry . . . . .	3	3
Math.	161 College Algebra and Trigonometry* .	5	5

Math.	251	Analytic Geometry .....	3	3
Math.	252	Differential Calculus .....	3	3
Math.	253	Advanced College Algebra .....	3	3
Math.	351	Integral Calculus .....	3	3
Math.	352	Probability and Statistics .....	3	3
Math.	353	Synthetic Geometry .....	3	3

<b>Elective:</b>			c.h.	s.h.
Math.	211	Modern Concepts of Mathematics		
Math.	254	College Geometry .....	3	3
Math.	255	Surveying .....	3	3
Math.	257	Mathematical Theory of Finance .....	3	3
Math.	261	Advanced Analytic Geometry .....	3	3
Math.	354	Theory of Equations .....	3	3
Math.	355	History of Mathematics .....	3	3
Math.	356	Modern Algebra .....	3	3
Math.	357	Modern Geometry .....	3	3
Math.	358	Computer Principles I .....	3	3
Math.	359	Computer Principles II .....	3	3
Math.	450	Mathematical Logic .....	3	3
Math.	451	Advanced Calculus .....	3	3
Math.	452	Differential Equations .....	3	3
Math.	453	Partial Differential Equations .....	3	3
Math.	454	Theory of Numbers .....	3	3
Math.	455	Boolean Algebra .....	3	3
Math.	456	Mathematical Statistics .....	3	3

\* May be substituted for Mathematics 151 and 152 with departmental approval.

## THE FIELD OF PHYSICS

( 38 Semester Hours)

<b>Required:</b>			c.h.	s.h.
Chem.	153	General Chemistry I .....	6	4
Chem.	154	General Chemistry II .....	6	4
**Ph.	258	Introductory Physics I .....	8	5
**Ph.	259	Introductory Physics II .....	8	5
*Ph.	351	Mechanics .....	6	4
*Ph.	352	Electricity and Magnetism .....	6	4
*Ph.	353	Atomic Physics .....	6	4
*Ph.	354	Optics .....	6	4

<b>Electives:</b>			c.h.	s.h.
*Chem.	354	Physical Chemistry I .....	6	4
Geog.	453	Descriptive Astronomy .....	3	3
Ph.	254	History of Physics .....	3	3
Ph.	257	Laboratory Tech. in Physics .....	5	3
*Ph.	356	Heat .....	6	4

Ph.	453	Physical Measurements .....	5	3
Ph.	455	Electronics .....	5	3
Ph.	457	Demonstration in Physics .....	5	3
*Ph.	458	Electrical Measurements .....	5	3
*Ph.	460	Major Concepts in Physics .....	3	3

\* Mathematics 351 is a prerequisite.

\*\* Mathematics 252 and Mathematics 351, Differential and Integral Calculus, should be scheduled concurrently with these courses.

Majors in the field should understand that Mathematics 351 must be preceded by Mathematics 151 and 152 or 161, and Mathematics 251 and 252.

Majors should not schedule Mathematics 111 or Physical Science 111 and 112 in their general education program.

## THE FIELD OF RUSSIAN

(24 Semester Hours, excluding Russian 151 & 152)

Required:		c.h.	s.h.
Russ.	251	Intermediate I .....	3
Russ.	252	Intermediate II .....	3
Russ.	255	Russian Civilization I .....	3
Russ.	256	Russian Civilization II .....	3
Russ.	351	Advanced Grammar & Composition	3

Electives:		c.h.	s.h.
Russ.	253	Scientific Russian .....	2
Russ.	353	Russian Drama .....	3
Russ.	354	The Russian Novel .....	3
Russ.	355	Readings in Soviet Russian Literature	3
Russ.	361	Dostoevsky .....	3
Russ.	451	Supervised Readings in Russian Literature .....	3

## THE FIELD OF SOCIAL STUDIES

(48 Semester Hours)

Forty-eight semester hours are needed to complete the Comprehensive Social Studies Major. Of these 48 semester hours a minimum of 12 semester hours must be in history and a minimum of 6 semesters in each of the following fields: Economics, Political Science, and Sociology. A total of 24 semester hours must be completed in any one field of the Social Studies, such as Economics, History, Political Science, or Sociology. Students are urged to take their hours of concentration in the field in which they intend to work after graduation.

No second field is required with the comprehensive social studies major. If a student with a major in another subject area, (English, Library Science, etc.) wishes to seek second field of concentration in one of the Social Sciences, a total of 24 semester hours must be completed in a single field. There is no comprehensive Social Studies minor and the state will not certify teaching in Comprehensive Social Studies for 18 or 24 hours.

**Required:**

			c.h.	s.h.
Hist.	111	History of Ancient and Medieval Civilization . . . . .	3	3
Hist.	112	History of Modern Civilization . . . . .	3	3
Hist.	211	History of U. S. and Pa. to 1865 . . . . .	3	3
Hist.	212	History of U. S. and Pa. 1865 to Present . . . . .	3	3
Econ.	211	Principles of Economics . . . . .	3	3
Soc.	211	Principles of Sociology . . . . .	3	3
P.S.	211	American Government . . . . .	3	3

**Elective:**

Anth.	211	Anthropology . . . . .	3	3
Anth.	354	Cultural History of Africa and Asia . . . . .	3	3
Anth.	355	Aboriginal North America . . . . .	3	3
Anth.	356	Field Archaeology . . . (arranged) . . . . .	4	
Anth.	357	Aboriginal South and Central America . . . . .	3	3
Anth.	358	World Prehistory . . . . .	3	3
Anth.	359	Primitive Science and Technology . . . . .	3	3
Anth.	360	Introduction to Folklore . . . . .	3	3
Anth.	400	Individual Research . . . . .	2	2
Econ.	212	Principles of Economics II . . . . .	3	3
Econ.	350	Microeconomic Theory . . . . .	3	3
Econ.	352	Aggregative Economics . . . . .	3	3
Econ.	353	Elements of Statistics . . . . .	3	3
Econ.	354	Money and Banking . . . . .	3	3
Econ.	355	Industrial Relations . . . . .	3	3
Econ.	356	Government Regulations . . . . .	3	3
Econ.	357	Public Utilities . . . . .	3	3
Econ.	358	International Economic Relations . . . . .	3	3
Econ.	359	Public Finance . . . . .	3	3
Econ.	360	Comparative Economic Systems . . . . .	3	3
Econ.	450	Managerial Economics . . . . .	3	3
Econ.	451	Business Cycles . . . . .	3	3
Econ.	452	History of Economic Thought . . . . .	3	3
Econ.	453	Economics Seminar . . . . .	3	3
Hist.	254	History of Latin America: Colonial Period . . . . .	3	3
Hist.	255	History of Latin America: National Period . . . . .	3	3

Hist.	256	History of Pennsylvania .....	3	3
Hist.	257	History of the Near East .....	3	3
Hist.	258	History of Asia—Ancient and Medieval .....	3	3
Hist.	259	History of Asia—Modern .....	3	3
Hist.	349	Ancient History .....	3	3
Hist.	350	Medieval History .....	3	3
Hist.	351	Renaissance and Reformation History .....	3	3
Hist.	352	History of Europe from 1660 to 1814 .....	3	3
Hist.	353	History of Europe from 1815 to 1924 .....	3	3
Hist.	354	Contemporary American History ..	3	3
Hist.	355	Economic History of U.S. ....	3	3
Hist.	356	Contemporary European History ..	3	3
Hist.	357	History of England to 1689 .....	3	3
Hist.	358	History of England since 1689 .....	3	3
Hist.	359	History of the American Frontier ..	3	3
Hist.	360	Colonial America .....	3	3
Hist.	361	History of American Science and Technology .....	3	3
Hist.	365	History of Russia .....	3	3
Hist.	452	Diplomatic History of U.S. ....	3	3
Hist.	453	20th Century World History .....	3	3
Hist.	454	The British Commonwealth of Nations .....	3	3
Hist.	455	Culture of Europe: Educational Tour .....		6
Hist.	456	Society and Thought in America to 1865 .....	3	3
Hist.	457	Society and Thought in America since 1865 .....	3	3
Hist.	458	English Constitutional History .....	3	3
P.S.	210	Introduction to Political Science .....	3	3
P.S.	351	State and Local Government .....	3	3
P.S.	352	International Relations .....	3	3
P.S.	353	International Organization: Theory and Practice .....	3	3
P.S.	354	Constitutional Law of U.S. ....	3	3
P.S.	355	Political Parties & Elections .....	3	3
P.S.	451	Comparative Government .....	3	3
P.S.	458	English Constitutional History .....	3	3
Soc.	351	Contemporary Social Problems .....	3	3
Soc.	352	Home and Family Living .....	3	3
Soc.	361	Sociology of Deviant Behavior .....	3	3
Soc.	362	Racial and Ethnic Minority Problems	3	3

**THE FIELD OF SPANISH****(24 Semester Hours, excluding Spanish 151 & 152)**

<b>Required:</b>		c.h.	s.h.
Span. 251	Intermediate I .....	3	3
Span. 252	Intermediate II .....	3	3
Span. 255	Hispanic Civilization I .....	3	3
Span. 256	Hispanic Civilization II .....	3	3
Span. 351	Advanced Grammar & Composition	3	3
<b>Elective:</b>		c.h.	s.h.
Span. 253	Commercial Spanish .....	2	2
Span. 352	Introduction to Spanish Literature ..	3	3
Span. 353	The Modern Spanish Drama .....	3	3
Span. 354	The Modern Spanish Novel .....	3	3
Span. 355	The "Generation of 1898" .....	3	3
Span. 359	The Literature of the Golden Age ..	3	3
Span. 361	The History of Mexican Literature ..	3	3
Span. 451	Supervised Reading in Hispanic Literature .....	3	3

**THE FIELD OF SPEECH****(24 Semester Hours)**

<b>Required: (Four of the following)</b>		c.h.	s.h.
Sp. 113	Fundamentals of Speech .....	3	3
Sp. 251	Voice and Diction .....	3	3
Sp. 253	Introduction to the Theater .....	3	3
Sp. 256	Argumentation and Debate .....	3	3
Sp. 354	Introduction to Oral Interpretation ..	3	3
<b>Elective:</b>			
Sp. 114	Advanced Public Speaking .....	2	2
Sp. 115	Parliamentary Procedure .....	1	1
Sp. 252	Introduction to Speech Correction ..	3	3
Sp. 254	Principles of Acting I .....	3	3
Sp. 255	Stagecraft and Lighting .....	3	3
Sp. 257	Advanced Debate .....	2	2
Sp. 264	Discussion .....	2	2
Sp. 311	Persuasion .....	3	3
Sp. 350	Summer Drama Workshop .....	6	6
Sp. 351	Advanced Theater Production .....	6	6
Sp. 352	Play Direction .....	3	3
Sp. 358	Psychology of Speech .....	3	3
Sp. 359	History of the Theater .....	3	3
Sp. 361	Principles of Acting II .....	3	3
Sp. 362	Principles of Stage Design .....	3	3
Sp. 363	Theatrical Costume and Makeup ....	3	3
Sp. 365	Advanced Oral Interpretation .....	2	2
Sp. 400	Oral Interpretation of the Bible ....	2	2

Sp.	401	Oral Interpretation of Elizabethan Literature	2	2
Sp.	402	Oral Interpretation of Greek and Roman Literature	2	2
Sp.	411	Classical Rhetoric	3	3
Sp.	412	British Public Address	3	3
Sp.	451	Advanced Speech	3	3
Sp.	453	Applied Phonetics	3	3
Sp.	454	Radio and Television	5	3
Sp.	455	Creative Dramatics	3	3

Students seeking a concentration in the Field of Speech may follow the core of required courses with specialization in General Speech, Oral Interpretation, Public Address, or Theater. Course requirements and sequences may be determined by the student with the help of his adviser.

### THE CURRICULUM IN LIBRARY SCIENCE

The State Council of Education on December 3, 1937, approved the establishment at Clarion State College of a curriculum for the education of school librarians. Library science courses are offered as one of the elective fields for students in a four-year curriculum.

In 1961 the State Council of Education approved a twelve-semester hour curriculum for endorsement in elementary school librarianship. A valid teaching certificate in elementary education is a prerequisite. This endorsement is valid only in those grades designated for the elementary schools.

Clarion's library science program offers a series of courses which will (1) meet the State requirements for elementary and secondary school librarianship, (2) give pertinent training in school library techniques and management, (3) broaden the student's knowledge and training in the use of educational media, (4) meet the requirements for the Equivalent Master's Degree Certificate, and (5) provide the basis for further study leading to a graduate degree from an institution of the student's choice. Students specializing in library science also must complete minimum requirements for certification to teach in one or more academic fields.

The degree program student begins his library science courses in the sophomore year. It is recommended that the student have at the minimum a "C" average to enter the program. (An average of "C" or better is required in library science courses; otherwise the student may be advised to withdraw from the program.) Also desirable is the ability to use a typewriter and a reading knowledge of a foreign language. The latter is particularly significant if the student plans to pursue a graduate degree after the completion of his undergraduate program.

# THE CURRICULUM IN LIBRARY SCIENCE EDUCATION

(Sequence of courses subject to change  
for administrative reasons.)

<b>1st Semester</b>						<b>2nd Semester</b>					
Eng.	111:	Composition I .....	3	Eng.	112:	Composition II .....	3				
Ph.Sci.	111:	Basic I .....	3	Ph.Sci.	112:	Basic II .....	3				
Biol.	111:	Basic .....	4	Sp.	113:	Fundamentals .....	3				
Geog.	111:	Basic .....	3	Math.	111:	Basic .....	3				
Hist.	112:	Modern Civ. ....	3	Hist.	212:	U.S. since 1865 .....	3				
HPE	112:	Phys. Ed. ....	2- 1	HPE	111:	Health .....	3- 2				
											18-17
<b>3rd Semester</b>						<b>4th Semester</b>					
Art	111:	Visual Arts .....	3	Mus.	111:	Introduction .....	3				
Eng.	213:	Introduction .....	3	Psy.	211:	General .....	3				
L.S.	257:	Basic Reference .....	3	L.S.	256:	Adm. Sch. Lib. ....	3				
L.S.	255:	Books & Libraries .....	2	*L.S.	258:	Selection Lib. Mtls. ....	3				
L.S.	259:	Art for Sch. Lib. ....	2- 1	HPE	212:	Phys. Ed. ....	2- 1				
HPE	211:	Phys. Ed. ....	2- 1			Elective .....	3				
											17-16
<b>5th Semester</b>						<b>6th Semester</b>					
Ed.	223:	Social Foundations ....	3	Psy.	222:	Educational .....	3				
Psy.	321:	Adolescent .....	2	Ed.		Methods in Acad. Fld. ....	3				
Ed.	329:	Audio-Visual Ed. ....	3- 2	**L.S.	359:	Curriculum Enr. ....	3				
L.S.	356:	Lib. Mtls.—Y.P. ....	3	L.S.	357:	Cat. & Class. ....	3				
		Electives .....	6			Electives .....	6				
											17-16
<b>7th Semester (or 8th)</b>						<b>8th Semester (or 7th)</b>					
Ed.	422:	Prof. Pract. & Sch. Law .....	2	Econ.	211 or Soc.	211: Principles ...	3				
Ed.	424:	St. Teach. & Libr. Pr.	30-12 32-14	Phil.	211:	Introduction .....	3				
				Geog.	257 or 254:	U.S. & Can. or Cons. ....	3				
				P.S.	211:	Am. Govt. ....	3				
				L.S.		Elective .....	3				
											15-15

\*Prerequisite to L.S. 356 and 358.

\*\*This course is a prerequisite to student teaching.

In order to be assigned to student teaching all library science majors must have completed courses 256, 257, 258, 259, 356, 357, 359 or their equivalents plus eighteen hours in a minor field plus the methods course in that field.

## CURRICULUM FOR THE ELEMENTARY SCHOOL LIBRARY SCIENCE CONCENTRATION

(Sequence of courses subject to change  
for administrative reasons.)

<b>1st Semester</b>						<b>2nd Semester</b>					
Eng.	111:	Composition I .....	3	Eng.	112:	Composition II .....	3				
Ph.Sci.	111:	Basic I .....	3	Ph.Sci.	112:	Basic II .....	3				
Hist.	213:	U.S. & Pa. ....	3	Art	011:	Fundamentals .....	2- 1				
Math.	111:	Basic .....	3	Biol.	111:	Basic .....	4				
Geog.	111:	Basic .....	3	Sp.	113:	Fundamentals .....	3				
HPE	112:	Phys. Ed. ....	2- 1	HPE	111:	Health .....	2				
											17-16
<b>3rd Semester</b>						<b>4th Semester</b>					
Eng.	213:	Introduction to Lit. ....	3	Ed.	223:	Social Found. ....	3				
Psy.		General .....	3	Art	111:	Visual Arts .....	3				
Mus.	131:	Lit. & Mtls. I (El.) ....	3	Mus.	132:	Lit. & Mtls. II (El.) ....	3				
Eng.	331:	Child Lit. ....	3	Hist.	112:	Modern Civ. ....	3				
Art	231:	Studio Experiences ....	3- 2	Art	222:	Teach Art El. Grad. ....	3- 2				
HPE	211:	Phys. Ed. ....	2- 1	HPE	223:	Phys. Ed. ....	2- 1				
L.S.	256:	Adm. of Sch. Lib. ....	3	*L.S.	258:	Sel. of Lib. Mtls. ....	3				
											20-18
<b>5th Semester</b>						<b>6th Semester</b>					
Psy.	320:	Human Growth & Dev. ....	5	El.Ed.	325:	Modern Curr. & Meth. ....	5				
El.Ed.	324:	Teaching of Arith. ....	3	El.Ed.	323:	Teach. of Reading ....	3				
Sci.	231:	Fused Science .....	2	Geo.	257 or 254:	U.S. & Can. or Cons. ....	3				
L.S.	358:	Lib. Mtls. Child. ....	3	Sci.	222:	Teaching Sci. El. Gr. ....	2				
L.S.	357:	Cat. & Class. ....	3	**L.S.	359:	Curriculum Enrich. ....	3				
<b>7th Semester (or 8th)</b>						<b>8th Semester (or 7th)</b>					
P.S.	211:	American Govt. ....	3	El.Ed.	424:	St. Teaching ....	30-12				
Phil.	211:	Introduction .....	3	El.Ed.	422:	Prof. Pract. & Sch. Law .....	32-14				
Soc.	211 or Econ.	211: Principles ...	3								
Ed.	329:	Audio-Visual Ed. ....	3- 2								
L.S.	257:	Reference .....	3								
		Elective .....	3								
											18-17

\*Prerequisite to L.S. 356 and 358.

\*\*This course is a prerequisite to student teaching.

**THE FIELD OF LIBRARY SCIENCE**  
**(24 Semester Hours)**

<b>Required:</b>		c.h.	s.h.
L.S.	255 History of Books and Libraries .....	2	2
L.S.	256 Administration of School Libraries ..	3	3
L.S.	257 Basic Reference Sources and Services ..	3	3
L.S.	258 Selection of Library Materials .....	3	3
L.S.	259 Art for School Librarians .....	2	1
L.S.	356 Library Materials for Young People ..	3	3
L.S.	357 Cataloging and Classification .....	3	3
L.S.	359 Curriculum Enrichment .....	3	3
<b>Electives:</b>		c.h.	s.h.
L.S.	358 Library Materials for Children .....	3	3
L.S.	455 Non-Book Materials as Library Resources .....	3	3
L.S.	456 Administration of the District Materials Center .....	3	3
L.S.	457 Independent Study Seminar .....	1-3	

**EQUIVALENT MASTER'S DEGREE CERTIFICATE**

The Department of Library Science offers preparation for the Equivalent Master's Degree Certificate, issued by the Department of Public Instruction of the Commonwealth of Pennsylvania, which may be secured upon the satisfactory completion of 30 semester hours of approved courses. This preparation may be completed in three to four summers. The candidate must possess an earned Bachelor's degree and hold a College Certificate or Equivalent College Certificate in order to pursue this program.

**ELEMENTARY SCHOOL LIBRARIANSHIP PROGRAM**  
**\*(18 Semester Hours)**

<b>Required:</b>		c.h.	s.h.
L.S.	256 Administration of School Libraries ..	3	3
L.S.	257 Basic Reference Sources and Services ..	3	3
L.S.	258 Selection of Library Materials .....	3	3
L.S.	357 Cataloging and Classification .....	3	3
L.S.	358 Library Materials for Children .....	3	3
L.S.	359 Curriculum Enrichment .....	3	3

Elementary majors choosing library science to fulfill the concentration requirement may wish to schedule more than 18 hours in the field. Thus, in addition to L.S. 358, one should elect L.S. 356.

\*The holder of a valid teaching certificate in elementary education may acquire an endorsement of library science upon the completion of 12 semester hours in the field. The following courses are required: L.S. 256, L.S. 258, L.S. 357, and L.S. 358.

### THE FIELD OF SAFE DRIVING AND GENERAL SAFETY EDUCATION (12 Semester Hours)

<b>Required:</b>		c.h.	s.h.
S.E. 351	Driver Education and Traffic Safety	3	3
S.E. 211	General Safety Education . . . . .	3	3
<b>Elective:</b>		c.h.	s.h.
S.E. 212	Organization and Administration of Safety Education . . . . .	3	3
S.E. 213	Materials and Methods of Teaching Safety in the Secondary Schools . .	3	3
S.E. 214	The Psychology of Accident Prevention . . . . .	3	3
S.E. 215	Visual and Other Aids in Safety Education . . . . .	3	3

Any college certificate may be extended to include Driver Education and General Safety Education by completion of 12 semester hours of above courses. However, such course work will not fulfill second field requirements for secondary majors nor concentration requirements for elementary majors.

### PROFESSIONAL EDUCATION—MENTAL RETARDATION (Required of all Mental Retardation Majors)

		c.h.	s.h.
Ed. 223	Social Foundations of Education . . .	3	3
Ed. 329	Audio-Visual Education . . . . .	3	2
El.Ed. 323	Teaching of Reading . . . . .	3	3
El.Ed. 324	Teaching of Arithmetic . . . . .	3	3
Spec.Ed. 321	Curriculum Development for Exceptional Children . . . . .	3	3
Spec.Ed. 422	Methods of Teaching Exceptional Children . . . . .	3	3
Ed. 422	Professional Practicum . . . . .	2	2
Spec.Ed. 429	Student Teaching . . . . .	30	12

## THE FIELD OF MENTAL RETARDATION

<b>Required: (23 Semester Hours)</b>		<b>c.h.</b>	<b>s.h.</b>
Spec.Ed.	111 Education of Exceptional Children . . . . .	3	3
Spec.Ed.	220 Nature of Mental Retardation . . . . .	3	3
Spec.Ed.	221 Neurological Impairment . . . . .	3	3
Psy.	320 Human Growth and Development . . . . .	5	5
Spec.Ed.	332 Educational Appraisal in Mental Retardation . . . . .	3	3
SPA	334 Speech Correction for the Classroom Teacher . . . . .	3	3
Spec.Ed.	424 Laboratory Methods with Exceptional Children . . . . .	3	3
<b>Electives: (17 Semester Hours)</b>		<b>c.h.</b>	<b>s.h.</b>
Spec.Ed.	423 Curriculum Materials for Exceptional Children . . . . .	3	3
Psy.	334 Abnormal Psychology . . . . .	3	3
Psy.	321 Adolescent Psychology . . . . .	3	2
Psy.	332 Psychology of Exceptional Children . . . . .	3	3
Psy.	335 Social Psychology . . . . .	3	3
Psy.	323 Mental Hygiene . . . . .	3	3
El.Ed.	332 Nursery-Kindergarten Education . . . . .	3	3
Eng.	331 Children's Literature . . . . .	3	3
Art	233 Art Crafts . . . . .	3	3
Art	312 Handcrafts . . . . .	3	3
Art	231 Studio Experiences in Art Processes . . . . .	3	2
Art	232 Teaching Art in the Elementary Grades . . . . .	3	2
Biol.	259 Physiology . . . . .	3	3
Biol.	356 Genetics . . . . .	3	3
Phil.	111 Elementary Logic . . . . .	3	3
Soc.	352 The Family . . . . .	3	3
Soc.	351 Contemporary Social Problems . . . . .	3	3
Soc.	353 Anthropology . . . . .	3	3
Soc.	361 Sociology of Deviant Behavior . . . . .	3	3
SPA	231 Hearing Problems . . . . .	3	3
Mus.	131 Literature and Materials of Music IE	3	3
Mus.	132 Literature and Materials of Music IIE	3	3
Geog.	256 Geography of Pennsylvania . . . . .	3	3

## THE CURRICULUM IN SPECIAL EDUCATION (Mental Retardation)

(Sequence of courses subject to change  
for administrative reasons)

### 1st Semester

			1st Semester	
Eng.	111: Composition I .....	3	Eng.	112: Composition II .....
Ph.Sci.	111: Basic I .....	3	Ph.Sci.	112: Basic II .....
Math.	151: Basic .....	3	Biol.	111: Basic .....
Geog.	111: Basic .....	3	Sp.	113: Fundamentals .....
Art.	111: Visual Arts .....	3	Sp.Ed.	111: Educ. of Exc. Children .....
HPE	111: Health .....	2	HPE	112: Physical Education ... <u>2-1</u>
		17-17		18-17

### 3rd Semester

			3rd Semester	
Psy.	211: General Psychology ...	3	Ed.	323: Human Growth .....
Eng.	213: Intro. to Lit. ....	3	Hist.	112: Social Foundations .....
Mus.	111: Introduction .....	3	Psy.	320: Modern Civilization ...
Hist.	212 or 213: U.S. and Pa. Hist.	3	Sp.Ed.	221: Neurol. Impairment ..
Sp.Ed.	220: Nature of M. R. ....	3	HPE	212: Physical Educ. ... <u>2-1</u>
HPE	211: Physical Educ. ....	<u>2-1</u>		Elective ..... <u>3</u>
		17-16		19-18

### 5th Semester

			5th Semester	
Phil.	211: Introduction .....	3	El.Ed.	324: Teaching of Arith. ....
El.Ed.	323: Teaching of Reading ..	3	Geog.	254 or 257: Cons. or U.S., Can. ....
Sp.Ed.	321: Curriculum Dev. ....	3	SPA	334: Sp. Corr. for Class. Teach. ....
Sp.Ed.	332: Education. Appraisal ..	3	Sp.Ed.	422: Methods .....
	Elective .....	3	Ed.	329: A-V Education ..... <u>3-2</u>
		15-15		Elective ..... <u>3</u>
				19-18

### 7th Semester (or 8th)

			7th Semester (or 8th)	
P.S.	211: American Gov. ....	3	Sp.Ed.	420: Student Teaching ..... <u>30-12</u>
Soc. or Econ.	211: Principles .....	3	Ed.	422: Professional Practic. .... <u>2-2</u>
Sp.Ed.	424: Lab. Methods .....	3		32-14
	Electives .....	6		
		15-15		

## PROFESSIONAL EDUCATION—SPEECH PATHOLOGY AND AUDIOLOGY

(Required of all Speech Correction Majors)

		c.h.	s.h.
Ed.	223 Social Foundations of Education .....	3	3
Ed.	329 Audio-Visual Communication .....	3	2
Ed.	422 Professional Practicum including School Law .....	2	2
El.Ed.	323 Teaching of Reading .....	3	3
Psy.	320 Human Growth and Development ..	5	5
Psy.	323 Mental Hygiene .....	3	3
SPA	422 Student Teaching with Speech & Hearing Handicapped .....	30	12

**THE FIELD OF SPEECH PATHOLOGY AND AUDIOLOGY**  
**(Speech Correction)**  
**(24 Semester Hours)**

This program provides the academic background necessary for graduate study in Speech Pathology and Audiology.

<b>Required:</b>		<b>c.h.</b>	<b>s.h.</b>
Spec.Ed.	111 Education of Exceptional Children ..	3	3
SPA	231 Hearing Problems .....	3	3
SPA	232 Clinical Phonetics .....	3	3
SPA	233 Anatomy of Speech and Hearing Mechanism .....	3	3
SPA	253 Speech Problems* .....	3	3
SPA	331 Speech and Hearing Clinic I: Practicum .....	$7\frac{1}{2}$	3
SPA	356 Speech Pathology .....	3	3
SPA	421 Speech Reading and Auditory Training .....	3	3

\*Sp. 252: Introduction to Speech Correction may be elected in place of Speech Problems.

<b>Electives: (14 Semester hours)</b>		<b>c.h.</b>	<b>s.h.</b>
SPA	332 Speech & Hearing Clinic II: Advanced Practicum .....	$7\frac{1}{2}$	3
SPA	432 Audiology .....	3	3
SPA	333 Curriculum Materials for Speech Correction .....	3	3
Ed.	224 Educational Tests and Measurements	3	3
Eng.	331 Children's Literature .....	3	3
Eng.	457 Introduction to Linguistics .....	3	3
Math.	161 College Algebra and Trigonometry .	5	5
Math.	358 Computer Principles I .....	3	3
Psy.	334 Abnormal Psychology .....	3	3
Psy.	335 Social Psychology .....	3	3
Psy.	331 Child Psychology .....	3	3
Soc.	353 Anthropology .....	3	3
Spec.Ed.	221 Neurological Impairment .....	3	3
Spec.Ed.	220 Nature of Mental Retardation .....	3	3
Spec.Ed.	322 Education Appraisal in Mental Retardation .....	3	3
Sp.	252 Introduction to Speech Correction ..	3	3
Sp.	251 Voice and Diction .....	3	3
Sp.	358 Psychology of Speech .....	3	3
Sp.	451 Advanced Speech .....	3	3
Sp.	453 Applied Phonetics .....	3	3
Phil.	111 Elementary Logic .....	3	3

# THE CURRICULUM IN SPEECH PATHOLOGY AND AUDIOLOGY

(Sequence of courses subject to change  
for administrative reasons)

<b>1st Semester</b>				<b>2nd Semester</b>			
Eng.	111: Composition I .....	3	Eng.	112: Composition II .....	3		
Sp.	113: Fund. of Speech .....	3	Geog.	111: Basic Ph. Geog. ....	3		
Ph.Sci.	111: Basic Ph. Sci. I .....	3	Ph.Sci.	112: Basic Phy. Sci. II .....	3		
Math.	111: Basic Mathematics .....	3	HPE	211: Physical Education .....	2- 1		
HPE	112: Physical Education .....	2- 1	Sp.Ed.	111: Ed. of Ex. Child. ....	3		
Hist.	112: Modern Civilization .....	3	Biol.	111: Basic Biol. Sci. ....	4		
		19-16					18-17
<b>3rd Semester</b>				<b>4th Semester</b>			
SPA	253: Speech Problems .....	3	SPA	356: Speech Pathology .....	3		
SPA	231: Hearing Problems .....	3	SPA	232: Clinical Phonetics .....	3		
Eng.	213: Intro. to Lit. ....	3	SPA	421: Sp. Rdng. & Aud. Trng. ....	3		
SPA	233: Anat. of Sp. & Hrng. Mech. ....	3	Psy.	211: General Psy. ....	3		
HPE	111: Health Education .....	2	Ed.	223: Social Found. of Ed. ....	3		
	Elective .....	3		Elective .....	3		
		17-17					18-18
<b>5th Semester</b>				<b>6th Semester</b>			
Hist.	212 or Hist. 213: U.S. & Pa. ..	3	SPA	331: Sp. & Hrng. Cl. I: Pract. .7½-3			
Psy.	320: Human Gro. & Dev. ..	5	Psy.	323: Mental Hygiene .....	3		
Phil.	211: Intro. to Phil. ....	3	Mus.	111: Intro. to Music .....	3		
HPE	212: Physical Educ. ....	2- 1	Art	111: Visual Arts .....	3		
	Elective .....	6	El.Ed.	323: Teach. of Rdng. ....	3		
		19-18		Elective .....	3		
							22½-18
<b>7th Semester (or 8th)</b>				<b>8th Semester (or 7th)</b>			
Geog.	257: U.S. & Canada or		SPA	422: Student Tching with Sp.			
Geog.	254: Cons. of Nat. Resour. ....	3		& Hrng. Handi. ....	30-12		
P.S.	211: Amer. Government ....	3	Ed.	422: Prof. Practicum Includ.			
Soc.	211: Prin. of Soc. ....	3		School Law .....	2- 2		
Ed.	329: Audio-Visual Commun. 3- 2						32-14
	Electives .....	6					
		18-17					

## EXTENSION OF CERTIFICATES TO INCLUDE SPECIAL EDUCATION

An elementary certificate may be extended to include Teaching the Mentally Retarded by completing the program listed below. A secondary certificate may be extended by following the same program with the addition of Teaching of Arithmetic (El. Ed. 324) and Teaching of Reading (El. Ed. 323).

			c.h.	s.h.
Sp.Ed.	111	Education of Exceptional Children ..	3	3
Sp.Ed.	220	Nature of Mental Retardation .....	3	3
Sp.Ed.	321	Curriculum Development for Exceptional Children (mentally retarded) ..	3	3
Sp.Ed.	422	Methods of Teaching Exceptional Children (mentally retarded) .....	3	3
Sp.Ed.	429	Student Teaching (mentally retarded) .....	6	

A certificate valid for teaching in the elementary or secondary school may be extended to include certification as Speech Correctionist by completing the program presented below. Course work should be taken in the sequence suggested, although certain courses may be taken concurrently.

			c.h.	s.h.
Sp.Ed.	111	Education of Exceptional Children .....	3	3
Psy.	323	Mental Hygiene .....	3	3
SPA	253	Speech Problems .....	3	3
SPA	232	Clinical Phonetics .....	3	3
SPA	231	Hearing Problems .....	3	3
SPA	356	Speech Pathology .....	3	3
SPA	421	Speech Reading and Auditory Training .....	3	3
SPA	331	Speech and Hearing Clinic I: Practicum .....	7½	3

## THE CURRICULUM IN PUBLIC SCHOOL NURSING

(60 Semester Hours)

The curriculum in public school nursing, open only to persons who are Registered Nurses, leads to the degree of Bachelor of Science in Public School Nursing.

### GENERAL EDUCATION

			c.h.	s.h.
Eng.	111	Freshman Composition I .....	3	3
Eng.	213	Introduction to Literature .....	3	3
Sp.	113	Fundamentals of Speech .....	3	3
Hist.	112	History of Modern Civilization .....	3	3
Hist.	212	History of U. S. and Pa. or Hist. 213      1865 to Present .....	3	3
P.S.	211	American Government .....	3	3
Soc.	211	Principles of Sociology .....	3	3
		Electives .....	11	
Total				32

### PROFESSIONAL EDUCATION

Ed.	223	Social Foundations of Education .....	3	3
Psy.	211	General Psychology .....	3	3
Psy.	222	Educational Psychology .....	3	3
Psy.	321	Psychology of Adolescence .....	2	2
Ed.	329	Audio-Visual Education .....	3	2
Total				13

**SPECIALIZED EDUCATION**

N.	351	Public School Nursing .....	3	3
N.	352	Specialized Health Problems of School Aged Children .....	3	3
N.	353	Family Case Work .....	3	3
N.	354	Public Health Nursing .....	3	3
S.E.	211	General Safety Education .....	3	3
	Total .....		15	

**VENANGO CAMPUS ELEMENTARY COURSE OFFERINGS**(Sequence of courses subject to change  
for administrative reasons.)

1st Semester			2nd Semester		
Eng.	111:	Composition I ..... 3- 3	Eng.	112:	Composition II ..... 3- 3
Sp.	113:	Speech ..... 3- 3	Biol.	111:	Basic ..... 4- 4
Hist.	112:	Modern Civilization ... 3- 3	Hist.	212:	U.S. & Pa. since 1865 ... 3- 3
Geog.	111:	Basic ..... 3- 3	Art	011:	Fundamentals ..... 2- 1
Ph.Sci.	111:	Basic I ..... 3- 3	Ph.Sci.	112:	Basic II ..... 3- 3
Math.	111:	Basic (Elem.) ..... 3- 3	HPE	111:	Health ..... 2- 2
					17-16
3rd Semester			4th Semester		
Eng.	213:	Intro. to Literature ... 3- 3	Geog.	257:	U.S. & Canada ..... 3- 3
Psy.	211:	General Psychology ... 3- 3	Psy.	222:	Educational Psychology 3- 3
Mus.	131:	Lit. & Mat. I ..... 3- 3	Mus.	132:	Lit. & Mat. II ..... 3- 3
Soc.	211:	Prin. of Sociology (or) ... 3- 3	P.S.	211:	American Government ... 3- 3
Econ.	211:	Prin. of Economics ... (3-3)	Art	111:	Visual Arts ..... 3- 3
Ed.	223:	Soc. Found. of Educ. ... 3- 3	Art	231:	Studio Experiences ... 3- 2
					18-17
		15-15			

**VENANGO CAMPUS SECONDARY COURSE OFFERINGS**(Sequence of courses subject to change  
for administrative reasons.)

1st Semester			2nd Semester		
Eng.	111:	Composition I ..... 3- 3	Eng.	112:	Composition II ..... 3- 3
Hist.	112:	Modern Civilization ... 3- 3	Hist.	212:	U.S. & Pa. since 1865 3- 3
Geog.	111:	Basic ..... 3- 3	Sp.	113:	Speech ..... 3- 3
Ph.Sci.	111:	Basic I (or) ..... 3- 3	Ph.Sci.	112:	Basic II (or) ..... 3- 3
Chem.	151:	Inorganic I ..... (8-5)	Chem.	152:	Inorganic II ..... (8-5)
Math.	111:	Basic (Sec.) (or) ... 3- 3	Biol.	111:	Basic (or) ..... 4- 4
Math.	151:	College Algebra ... (3-3)	Math.	152:	College Trig ..... (3-3)
HPE	111:	Health ..... 2- 2			16-16
3rd Semester			4th Semester		
Eng.	213:	Intro. to Literature ... 3- 3	P.S.	211:	American Government . 3- 3
Psy.	211:	General Psychology ... 3- 3	Psy.	222:	Educational Psychology 3- 3
Mus.	111:	Introduction to Music .. 3- 3	Art	111:	Visual Arts ..... 3- 3
Soc.	211:	Prin. of Sociology (or) ... 3- 3	Geog.	257:	U.S. & Canada (or) ... 3- 3
Econ.	211:	Prin. of Economics ... (3-3)	Geog.	254:	Cons. of Natl. Res. ... (3-3)
Ed.	223:	Social Found. of Ed. ... 3- 3			
		(or) Elective ..... (3-3)			
		15-15			15-15
Electives					

Eng.	251:	English Literature ... 3- 3	Eng.	252:	American Literature .. 3- 3
Hist.	151:	Ancient Civilization ... 3- 3	Eng.	355:	Novel since 1870 ..... 3- 3
Hist.	251:	U.S. & Pa. to 1865 ... 3- 3	Math.	252:	Differential Calculus .. 3- 3
Math.	251:	Analytic Geometry ..... 3- 3	Math.	253:	Advanced Coll. Algebra ... 3- 3
Ph.	251:	General Physics I .... 6- 4	Ph.	252:	General Physics II ... 6- 4
Biol.	263:	Zoology ..... 6- 4	Biol.	264:	Botany ..... 6- 4
Fr.	151:	Elementary French I .. 3- 3	Fr.	152:	Elementary French II .. 3- 3
Fr.	251:	Intermediate French I . 3- 3	Fr.	252:	Intermediate French II 3- 3
Span.	151:	Elem. Spanish I ..... 3- 3	Span.	151:	Elem. Spanish II ..... 3- 3
Span.	251:	Intermediate Spanish I . 3- 3	Span.	252:	Intermediate Spanish II 3- 3

## LIBERAL ARTS AND SCIENCES

### Objectives and Characteristics

The undergraduate program in the arts and sciences at Clarion State College has two fundamental purposes:

1. To provide the student with the kind of broad general education that will enable him to adapt to the complexities of the world in which he must live; that will give him an understanding and appreciation of the intellectual, cultural, and moral forces which have shaped our world; and that will engender in him the kind of intellectual awareness which will make him strive for educational growth throughout his life.
2. To give the student the depth of knowledge in a discipline that will enable him to enter a graduate or professional school or that will provide him with the proper foundation for a career in government, social service, or industry.

To help achieve these objectives the program of the candidate for the Bachelor of Arts degree is divided into three categories: (1) **General Education**. He completes a series of general education requirements in the Humanities (English, music, art, language, etc.), the Social Sciences (history, political science, economics, etc.), and the Natural Sciences (biology, mathematics, geology, etc.). (2) **Area of Concentration**. As his interests direct, he chooses a major area of concentration within the Humanities, Social Sciences, or Natural Sciences and develops a program in depth with the assistance of a departmental advisor. (3) **Electives**. He takes a number of electives, usually after consultation with an advisor, in subject areas of his own choice.

Concerned primarily with intellectual growth, the curriculum in the Liberal Arts and Sciences at Clarion recognizes the individual nature of this growth and the importance of personal ideals and moral values. Consequently, the plan for the curriculum provides a framework within which each student selects his own program with counsel from a faculty advisor.

### Admission and Fees

Admission to the liberal arts and sciences program is governed by the admissions policy presented on pages 23-26 of the bulletin.

For Pennsylvania residents, a basic fee for the Liberal Arts Curriculum of \$150.00 for each semester of eighteen weeks shall be charged to cover registration and keeping of records of students, library, student health service (other than extra nurse and quarantine), and laboratory facilities. A check for this amount must be drawn to the Commonwealth of Pennsylvania.

The basic fee for ten or fewer semester hours during a semester is \$15.00 per semester hour. (Minimum basic fee \$45.00.)

All other charges are the same as those summarized on pages 33-36.

### Scholarship Requirements

The scholarship requirements for students in the Liberal Arts and Sciences are identical with those of all other students in Clarion State College summarized on pp. 26-28.

## THE CURRICULUM

### Summary of Credit Requirements

English Composition

6 credits

Foreign Language

14 credits

(If any part of this requirement is exempted, the student must earn the credits in electives in language or other areas.)

General Education

30 credits

(In addition, the student must meet a 15 credit general education requirement within his area of concentration.)

Area of Concentration

54-60 credits

(This includes the 15 credit general education requirement in the area.)

Electives

14-20 credits

Health and Physical Education

4 credits

Total required for graduation

128 credits

### General Education

The following general requirements must be met by all candidates for the Bachelor of Arts degree regardless of their area of concentration:

#### 1. English Composition: 6 credits

English 111

English 112

#### 2. Foreign Language

This requirement may be satisfied in one of the following ways:

a. By an adequate score on a language placement examination administered by the Foreign Language Department. **Note:** Credit is not granted for exemptions made as a result of the placement examination.

b. By passing French, German, Russian, or Spanish 252.

#### 3. Humanities: 15 credits

This requirement applies only to Liberal Arts students majoring in the Social Sciences or the Natural Sciences and Mathematics. Humanities majors must meet the requirements listed on pp. 74-75.

- a. A minimum of 3 credits in each of the following fields with at least 6 credits in one of them:

### Literature

English 213	Introduction to Literature
English 251	English Literature
English 252	American Literature

### Philosophy

Philosophy 211	Introduction to Philosophy
Philosophy 212	Ethics
Philosophy 255	History of Philosophy I
Philosophy 256	History of Philosophy II

- b. Six credits in the Fine Arts, including 3 credits from at least two of the following fields:

### Art

Art 111	The Visual Arts
Art 112	History of Art I
Art 113	History of Art II

### Music

Music 111	Introduction to Music
Music 151	Literature and Materials of Music I
Music 152	Literature and Materials of Music II

### Theatre Arts or Speech

Speech 113	Fundamentals of Speech
Speech 251	Voice and Diction
Speech 253	Introduction to the Theatre

### 4. Natural Sciences and Mathematics: 15 credits

This requirement applies only to students majoring in the Humanities and Social Sciences. Natural Sciences and Mathematics majors must meet the requirements listed on pp. 76-78.

- a. Three credits in mathematics or logic:

Mathematics 111	Basic Mathematics
Mathematics 151	College Algebra
or	
Philosophy 111	Elementary Logic

- b. Twelve additional credits chosen from the following fields with at least 6 credits in one field:

### Biology

Biology 111	Basic Biological Science
Biology 153	General Biology I
Biology 154	General Biology II

**Chemistry**

Chemistry 153	General Chemistry I
Chemistry 154	General Chemistry II

**Earth Science**

Geography 111	Basic Physical Geography
Geography 252	Geology
Geography 253	Geomorphology
Geography 353	Descriptive Astronomy
Phy. Science 111	Basic Physical Science I
Phy. Science 112	Basic Physical Science II

**Mathematics**

Mathematics 111	Basic Mathematics
Mathematics 151	College Algebra
Mathematics 152	College Trigonometry
Mathematics 161	College Algebra and Trigonometry

**Physics**

Physics 251	General Physics I
Physics 252	General Physics II

**5. Social Sciences: 15 credits**

This requirement applies only to Humanities and Natural Science and Mathematics majors. Social Science majors must meet the requirements listed on pp. 78-80.

**a. Six credits in history:**

History 111	History of Ancient and Medieval Civilization
History 112	History of Modern Civilization
History 211	History of United States and Pennsylvania to 1865
History 212	History of United States and Pennsylvania— 1865 to present

**b. Three credits in economics and three credits in political science:**

Economics 211	Principles of Economics I
Political Science 210	Principles of Political Science
Political Science 211	American Government

**c. Three credits in one of the following fields:**

Sociology 211	Principles of Sociology
Sociology 353	Anthropology
Psychology 211	General Psychology

## MAJORS IN THE HUMANITIES

The Program for the Bachelor of Arts degree with a major in one of the areas of the Humanities combines a broad requirement in general education with advanced study in foreign languages, literature, music, philosophy, speech, and theater arts.

In general, the fields within this area are concerned with two things. First, they are concerned with the fundamental purposes, beliefs, and ideals which underlie all human experience and bind it together. The student, therefore, becomes acquainted in depth with the intellectual endeavors, the aesthetic expressions, and the moral strivings that have defined human experience. Second, the Humanities are concerned with aiding the student to acquire the skills, sensitivities, and canons of taste essential to appraising, judging, and creating within his field.

### THE PROGRAM

#### A. General Requirements

STUDENTS MUST COMPLETE A MINIMUM OF 54 CREDITS IN THE HUMANITIES, NOT COUNTING THE 14 CREDIT REQUIREMENT IN FOREIGN LANGUAGES TAKEN BY ALL LIBERAL ARTS STUDENTS.

All students who elect to concentrate in the Humanities are required to earn a minimum of 15 credits in general education in the area, making certain that each of the following fields is represented: art, English (literature), music, philosophy, and speech and theater arts.

Note: This 15 credit requirement, however, cannot include courses in a student's major field. For example, if he is majoring in English, he cannot use a course in English to help meet the requirement.

#### B. Majors

Within the Humanities a student may major in one of the following fields. Since the courses are those recommended by the department involved, variations from the listed pattern should be made only in consultation with the department.

Courses taken to meet General Area Requirements ("A," above) may be applied to the major where appropriate.

**English:** 33 credits beyond English 111, 112

Required: English 213, 251, 252. Recommended: Group A—English 453, 353, 354, 454, 458, 257, 452, 455. Group B —English 255, 256, 356, 254, 457, 355, 451, 258.

<b>Foreign Languages</b>	30 credits
Language 151, 152 do not count toward the major.	
Required for all languages: 251, 252, 255, 256, 351.	
<b>French:</b> A minimum of 15 additional credits elected from 353, 354, 355, 356, 357, 358, and 359.	
<b>German:</b> 352, 353, 354, 355, 358.	
<b>Russian:</b> 353, 354, 355, 356, and 3 credits by appointment with the department.	
<b>Spanish:</b> 15 additional credits elected from 352, 353, 354, 355, 359, 361.	
<b>Music</b>	37 credits
Required: Music 151, 152, 251, 252, 351. The remaining 22 credits are distributed among applied music (voice or instrument), participation in musical organizations, and electives chosen in consultation with a departmental advisor.	
<b>Philosophy</b>	27 credits
Required: Philosophy 111, 211, 212, 255, 256, 450. The remaining 9 credits are electives, which should be chosen in consultation with a departmental advisor.	
<b>Speech</b>	36 credits
Required of all students regardless of concentration within the department, four of the following: Speech 113, 251, 253, 256, 354. Concentrations: <b>Public Address.</b> Speech 114, 264. Three of the following: Speech 311, 411, 412, 451. Speech electives: 11 credits. <b>Oral Interpretation.</b> Speech 365, 400, 401, 402. Speech electives: 16 credits. <b>General Speech</b> 6 credits in each of public address, oral interpretation, and theater (speech science may be substituted for one of the areas). Speech electives: 6 credits.	
<b>Theatre</b>	39 credits
Required: Speech 253, 254, 352, 359, 362, English 353 (Shakespeare), Philosophy 354 (Aesthetics). Electives: 18 credits to be taken by students in consultation with a departmental advisor.	
<b>Area Major</b>	9 credits
Instead of majoring in a specific subject field within the Humanities, a student may choose to complete area requirements by taking a minimum of 9 additional credits distributed in the following fields: English, Foreign Languages, Music, Philosophy, Speech and Theater Arts.	
<b>C. Electives</b>	
The number of credits in free electives available to a student majoring in the Humanities will vary from program to program. The student should choose elective courses in the arts and sciences with the assistance of a faculty advisor.	

## MAJORS IN THE NATURAL SCIENCES AND MATHEMATICS

The program for a Bachelor of Arts degree with a major in one of the areas of the Natural Sciences and Mathematics combines a broad requirement in general education with advanced study in biology, chemistry, earth science, mathematics, and physics.

The natural sciences are concerned with describing, explaining, and predicting events in the natural world. Work taken in the area is, for the most part, quite specialized, each field having developed a broad body of cumulative knowledge and procedures that are rigorous and analytical. Extensive work taken in the sciences, however, brings the student into contact with both mathematics and some of the other fields in this area. Consequently, students who elect to concentrate in the Natural Sciences and Mathematics should strive both for deep comprehension in a particular field and for an understanding of the problems, procedures, and results of related fields.

### THE PROGRAM

#### A. General Requirements

STUDENTS MUST COMPLETE A MINIMUM OF 54 CREDITS IN THE NATURAL SCIENCES AND MATHEMATICS.

The language requirement for students majoring in this area must be met in French or German.

All students who major in the Natural Sciences and Mathematics must arrange their programs so that they will earn at least 29 credits in general education in the area, making certain that each of the following fields is represented: biology, chemistry, earth science, mathematics, and physics.

#### B. Majors

Within the Natural Sciences and Mathematics a student may major in one of the following subject fields. Variations from the listed patterns should be made only in consultation with departmental advisors.

Courses taken to meet general area requirements ("A," above) may be applied to the major where appropriate.

**Note:** Because of the important sequential nature of the programs in this area, the student should consult with a departmental advisor at his earliest opportunity to be assured of developing the proper pattern.

#### Biological Sciences

Students electing the Biological Sciences for major emphasis can plan a program in one of several specialized

areas: 1. Physiological Biology; 2. Structural and Developmental Biology; 3. Environmental Biology; 4. Integrated Biology; or they can pursue the traditional approaches: General Biology, Zoology, or Botany.

Required Courses for all students: Biology 153, 154, and 263 or 264 (or both depending on interests). The remainder of the program is elective according to the needs and goals of the student.

Students are advised to take the following supplementary courses: Mathematics 161; Chemistry 153, 154, 251, 353; Physics 251, 252; and Geography 111.

**Chemistry** 30 credits

Required courses: Chemistry 151, 152, 251, 252, 352, 354, 355, and 357. Required Mathematics courses: 161, 251, 252, 351. Required physics courses: 251, 252. Although not required, it is strongly recommended that Chemistry majors elect either an advanced organic or inorganic chemistry course, Mathematics 352 and 452, and either Physics 353 or 354.

**Physical Geography** 30 credits

Required: Geography 111, 252, 258, 253, 351, 352, 451. The remaining 9 credits to be elected from Geography 251, 254, 257, 353, 355, 357, 452, 453. Required mathematics courses: Mathematics 161, 251.

**Mathematics** 38 credits

Required: Mathematics 161, 251, 261, 252, 351, 354, 451, 356, 452. The remaining 9 credits are elective and may be chosen from among Mathematics 255, 257, 355, 357, and 453.

**Physics** 26 credits

Required courses: Physics 258, 259, 351, 352, 353, and 354. Recommended physics electives: 253, 258, or 360. Required mathematics courses: 161, 251, 252, and 351. Required chemistry courses: 153 and 154. Although not required, it is strongly recommended that Physics majors elect the following courses: Mathematics 352 and 452, and Chemistry 354.

**Area Major** 25 credits

Instead of majoring in a specific subject field within the Natural Sciences and Mathematics, a student may choose to complete area requirements by taking a minimum of 25 additional credits in one or more of the following fields: biology, chemistry, mathematics, physics, and physical geography. The student must elect a sufficient number of the more advanced courses to promote a scholarly interest in the field.

### C. Electives

The number of credits in free electives available to a student majoring in the Natural Sciences and Mathematics will vary from program to program. Students should choose elective courses in the arts and sciences with the assistance of a faculty advisor.

## MAJORS IN THE SOCIAL SCIENCES

The program for a Bachelor of Arts degree with a major in one of the areas of the Social Sciences combines a broad requirement in general education with advanced study in economics, geography, history, political science, psychology, or sociology-anthropology.

The Social Sciences area of concentration is concerned with man and his social environment, with human institutions, and with the modes of procedure by which men live, work, and play together. While the various fields that comprise this area have developed methodologies that are appropriate to the groups of institutions and problems they have selected to explore, they are all so intimately related that competence in a field presupposes a deep familiarity with the area in general.

The particular fields and courses selected will depend largely on the student's interests and needs. Generally, however, each student electing to concentrate in this area should strive: (1) to develop a deep understanding of the problems, principles, and practices of one of the fields in the area; (2) to become competent in the skills that are necessary for various types of work in that field; and (3) to comprehend the interrelationships existing between that field and several others affecting it.

## THE PROGRAM

STUDENTS MUST EARN A MINIMUM OF 54 CREDITS IN THE SOCIAL SCIENCES.

### A. General Requirements

All students electing the Social Science area of concentration are required to take the following courses:

Economics 211	Principles of Economics I
Economics 212	Principles of Economics II
History 111	Ancient and Medieval Civilization
History 112	Modern Civilization
History 211	The United States to 1865
History 212	The United States, 1865 to Present
Political Science 210	Principles of Political Science
Political Science 211	American Government

Sociology 211 One elective in Sociology	Principles of Sociology
Psychology 211 One elective in Psychology	or General Psychology
Sociology 211 Psychology 211	or Principles of Sociology General Psychology
Sociology 353 One course in either Sociology or Psychology	or Anthropology

## B. Majors

Within the Social Sciences a student may major in any of the following fields. At his earliest opportunity, the student should consult with an advisor to plan a departmental program which will best fit his interest and needs.

Courses taken to meet General Area Requirements ("A," above) may be applied to the major where appropriate.

<b>Economics</b>	24 credits
------------------	------------

Required: Economics 211, 212 as prerequisites to all other economics courses. The remaining 18 credits are elective. Note: Economics 151, 152, 251, 252, 301, 302, and 401 (all accounting courses) cannot be counted toward the 24 credit requirement in this field but may be taken as free electives.

<b>Geography</b>	30 credits
------------------	------------

Required: Geography 111, 251, 257, 454, 356, 354, 451. The remaining 9 credits to be elected from Geography 355, 357, 452, 453, and 254. Although not required, the following courses are strongly recommended: Geography 252, 258, 352, 353; Mathematics 161.

<b>History</b>	30 credits
----------------	------------

Required: History 111, 112, 211, 212. The remaining 18 credits are history electives. Of these, 12 credits must be taken in courses on the 300 and 400 levels.

<b>Political Science</b>	24 credits
--------------------------	------------

Required: Political Science 210, 211. The remaining 18 credits are political science electives.

<b>Psychology</b>	30 credits
-------------------	------------

Required: Psychology 211, 251, 252, and 451. The remaining 18 credits are psychology electives. Strongly recommended supplementary courses: Biology 153-154, Mathematics 151-152 or 161, Sociology 211, Sociology 353, and other sociology courses.

Note: Psy. 222 (Educational Psychology) may not be counted toward a major in Psychology.

**Sociology-Anthropology** 24 credits  
Required: Sociology 211. The remaining 21 credits are sociology and/or anthropology electives. If a student wishes to concentrate in anthropology, he must take Sociology 353.

**Area Major** 24 credits  
Instead of majoring in a specific subject field within the Social Sciences, a student may choose to complete area requirements by taking a minimum of 24 additional credits distributed in the following fields: anthropology, economics, history, political science, and sociology. The student must elect a sufficient number of courses on the 300 and 400 level to promote a scholarly interest in a field.

**C. Electives** 24 credits  
The number of credits in free electives available to a student majoring in the Social Sciences will vary from program to program. Students should choose elective courses in the arts and sciences with the assistance of a faculty advisor.

### **FREE ELECTIVES IN LIBRARY SCIENCE FOR LIBERAL ARTS STUDENTS**

Regardless of their majors, all liberal arts students have a number of **free electives** which must be taken to complete the 128 credits required for graduation.

Students who wish to do so may elect 12 to 18 credits in library science courses as part of their free elective program. By taking the following courses, liberal arts graduates may be able to qualify as **provisional librarians** under the Pennsylvania State Library Code, and they will have the prerequisite courses required to pursue a graduate degree in library science:

L.S. 257	Basic Reference Sources and Services	....	3 credits
L.S. 258	Selection of Library Materials	.....	3 credits
L.S. 260	Development and Administration of Libraries	.....	3 credits
L.S. 357	Cataloging and Classification	.....	3 credits

### **COURSE DESCRIPTIONS ANTHROPOLOGY**

<b>Anth. 211: Anthropology</b>	<b>3 s.h.</b>
This course deals with the origin, diversification, and evolution of man's way of life (cultures) from extinct primitive systems to modern industrial civilizations. This course is an introduction to Anthropology (the study of man) with emphasis on the nature and concept of culture. Some work is done in Physical Anthropology. Emphasis is placed on the simple and complex cultures of the world with specific readings in each category.	

**Anth. 354: Cultural History of Africa and Asia**

3 s.h.

This course begins with the rise and development of Islam and includes the expansion of Arab cultures into the Middle East and North Africa, the Muslim contribution to western civilization, Arab age of discovery in the Indian Ocean, the Ottoman Empire in Asia, and Arab nationalism. The second section deals with pre-history Africa as revealed by modern archaeology, a synopsis of African tribal cultures, the role of white explorers, and the imprint of colonialism on the modern African scene.

**Anth. 355: Aboriginal North America**

3 s.h.

This course begins with the study of the earliest archaeological evidence for the presence of Homo sapiens in the New World, the gradual development of Native Amerind cultures during the Palaeo-Amerind period, and the subsequent Archaic level as it shows the native population in balance with the environmental resources. While the initial emphasis will be upon the rise and development of indigenous cultural patterns, considerable time will be devoted to a close scrutiny as to how man utilized his environment.

**Anth. 356: Field Archaeology**

4 s.h.

This course will give undergraduate students an opportunity to participate actively in all phases of archaeology field investigation of a limited section of the Allegheny river drainage in order to determine cultural sequence, settlement patterns, population density, economy, cultural influences, technologies, and human ecology. Procedures will include reconnaissance, testing of suspected sites, site survey, controlled excavation, site mapping, interpretation and recovery of specimens, and a final site report.

**Anth. 357: Aboriginal South and Central America**

3 s.h.

A survey of Indian cultures from the beginnings in the Late Pleistocene to the coming of the Conquistadores; special emphasis is placed upon culture developments, the rise of states, native agriculture, and the development of arts and crafts, including architecture and ceremonial art. Prerequisite: An introductory course in either Anthropology or Sociology.

**Anth. 358: World Prehistory**

3 s.h.

This course covers the cultural development of Man from the Lower Palaeolithic to the beginnings of urbanism in the Bronze and Iron Age. The course examines man's development in Europe, Africa, Asia, and the New World, draws comparisons between cultures, studies the diffusion of cultural traits, and summarizes recent developments in research. Prerequisite: None.

**Anth. 359: Primitive Science and Technology**

3 s.h.

This course is designed to provide a better understanding in Man's relationship with and utilization of environment. It traces the development which ultimately leads to the rise of technological societies. In investigating Man's attempts to come to an understanding of the forces around him, the course provides a survey of the history of scientific thought. Prerequisites: Soc. 211, Anth. 211.

**Anth. 360: Introduction to Folklore**

3 s.h.

The course covers the main aspects of oral traditions such as folktale, legend, myth, riddle, folksong, etc., and analyzes the relationship of oral traditions to literature. The systematic study of folklore, its methods, research approaches, and related subjects are investigated. No Prerequisite.

**Anth. 400: Individual Research****2 s.h.**

Individual research, designed as an advanced course in anthropology, provides for the student's individual approach to a specific problem, defined in conference with the instructor. Regular sessions with the faculty member in charge evaluate the progress of the work and chart its direction. Students are expected to acquire research techniques in dealing with their topics. All branches of anthropology may be used to select a topic. Credit and grades will be given only if the project (term paper, survey, investigation, etc.) has been completed to the satisfaction of the project adviser and the departmental chairman. Prerequisite: Anth. 211.

**ART**

The courses of the Art Department are structured to develop an understanding of the place of the visual arts in education and society. Specific courses related to public school art at the elementary level emphasize the relationship of art to other curricular areas, investigate creative growth, and provide studio experiences in various media and processes.

Elementary majors may also pursue a Field of Concentration in Art. Courses in this area are designed to provide broader understandings of the function of art in a contemporary society.

A strong elective program is available to any student, regardless of curriculum, and affords advanced work in both two and three-dimensional expression.

**Art 011: Art Fundamentals****1 s.h.**

A course in the fundamentals of art expression. Principles of design and their application to art products are discussed and made meaningful through studio work. Techniques and various approaches to basic skills in drawing, color, texture, form, and space are given attention.

**Art 111: The Visual Arts****3 s.h.**

The great trends in the visual arts, both past and contemporary, and their relationship to society are studied. An examination of the nature of creative artistic expression is made. Emphasis is also given to the utilitarian aspects of art. These include architectural design, community art forms, products of an industrial society, and commercial uses of art. Studio experiences are provided to assist the student in forming a deeper understanding and sensitivity to all art forms.

**Art 112: History of Art I****3 s.h.**

Visual expressions of different cultures from the basic beginning of the Paleolithic Period to the High Renaissance are studied. Architecture, painting, sculpture, and the significant minor art forms are emphasized. The relationship of art to the many facets of man's environment are discussed.

**Art 113: History of Art II****3 s.h.**

Western and Oriental art forms from the Renaissance to the present are given careful attention. Architecture, painting, sculpture, graphics and significant minor art forms are studied. Particular emphasis is given to contemporary expression, the new movements, the ideas and technology which affect the artist as he functions in today's society.

**Art 222: Teaching Art in the Elementary Grades**

2 s.h.

The place of art in the elementary public school curriculum is studied and discussed. Lectures center around the creative growth and development of the child at different age levels and the fusion of art with the life experiences of the child. Techniques of lesson planning, presentation, and classroom procedure at the elementary level are developed and utilized in actual teaching situations. Discussions, observations in schools, individual research problems, written reports, and visual materials provide broad practical experiences. Prerequisite: Art 231 or equivalent preparation.

**Art 231: Studio Experiences in Art Processes**

2 s.h.

This is a basic course designed to develop sensitivity and insight into art media and processes. Students develop skills, imagination, and techniques to increase understandings in the visual forms. Various projects make use of crayons, chalk, tempera, watercolor, clay, sculptural media, printing techniques, and scrap materials. Work is both two and three-dimensional. Prerequisite: Art 011 or equivalent preparation.

**Art 232: Experimental Art Techniques**

3 s.h.

The primary aim of this elective course is to develop expression in drawing, oils, watercolor, casein, and the graphic arts. Investigations in some specific areas which meet student needs and interests are encouraged. Open to all curricula.

**Art 233: Arts and Crafts**

3 s.h.

This is a course with a dual purpose. First, it is an enrichment course meant to give vital experience with the arts and crafts to any college student. Second, it is to provide sufficient knowledge and skill for teaching of the arts and crafts in the elementary field. A great deal of freedom is given students in initiating their own projects and carrying them out. Stenciling, weaving, decorative painting, and modeling are only a few of the many offered.

**Art 234: Elementary Art Workshop**

3 s.h.

A workshop designed to meet the needs of teachers in service. Emphasis is placed on newer approaches and presentations, art and other school subjects, materials, processes, and equipment used in today's elementary art program. Offered in summers only.

**Art 235: Practical Problems in Art Education**

3 s.h.

Practical problems in art education may be and usually are varied in nature. Some students require more information regarding methods of teaching and others feel that more art techniques are desirable. Whatever the students regard as problems are considered the objectives of the course and are studied to the point where students' needs are considered satisfied.

**Art 236: Creative Design**

3 s.h.

A study of the basic principles of line, color, and texture in both two and three dimensions. Creative approaches are stressed rather than formal principles. Major attention is placed on the exploration of materials and processes and their application to elementary activity.

Recommended for students pursuing Field of Concentration in Art.

**Art 237: Drawing and Composition****3 s.h.**

Problems in basic drawing and composition techniques in various media. Inventive interpretations from varied visual materials and imaginative approaches. Use of blackboard and other supports is emphasized. Recommended for students pursuing Field of Concentration in Art.

**Art 300: Ceramics****3 s.h.**

Design and construction of clay pieces in varied techniques and approaches. Basic clay and glaze technology, hand building, throwing, turning, and firing processes.

**Art 311: Graphic Media and Techniques****3 s.h.**

Broad experiences in a wide range of media and processes of graphic expression. Both old and new approaches in lino-cuts, wood block, etching, dry point, lithography, serigraphy, and exploration with new techniques.

**Art 312: Handcrafts****3 s.h.**

This course is structured to assist student development in basic craft media and processes. Attention is given to construction in varied materials, weaving, leather craft, textile work, model construction, and other related areas. The richer aspects of the plastic elements and design are emphasized.

**Art 313: Crafts in the Elementary Schools****3 s.h.**

Broad experiences with a variety of media common to today's elementary program. Commercially made and discarded materials for craft production are utilized and evaluated as to their potential and value. Source material is developed to assist in planning craft activity. A useful course for those engaged in summer playground work.

**Art 315: Landscape Painting****3 s.h.**

A basic course serving as an introduction to the problems of landscape painting. Use of oil, casein, watercolor, and mixed media in work taken directly from nature, imagination, and memory.

**Art 316: Sculpture****3 s.h.**

This course emphasizes the aesthetic, structural, and technical principles of three-dimensional form while stressing cast sculpture as a means of artistic expression. The student will experience direct control of clay, wax, plastic, wood and mixed media, while carrying out the various stages of casting in bronze, lead, and aluminum.

## BIOLOGY

**Biol. 111: Basic Biological Science****4 s.h.**

This course deals with the principles of biology. Topics include cellular structure and physiology, growth and repair, reproduction and development, control, sources of food energy, inheritance, and man's interrelationship with his biological environment. The classification of plants and animals is reviewed briefly.

**Biol. 153: General Biology I****4 s.h.**

This course is designed for biology majors. Emphasis is placed on plant and animal metabolism, growth, reproduction, heredity, adaptation, and evolution. Considerable attention is given to the chemical, physical, and biological organization of plant and animal life. Two hours lecture and four hours laboratory weekly.

**Biol. 154: General Biology II**

4 s.h.

A continuation of Biol. 153. These two courses are designed to provide the prospective biology major with a firm foundation for subsequent courses in the science of biology. Two hours lecture and four hours laboratory weekly.

**Biol. 253: Ornithology**

3 s.h.

An introduction to the birds of Pennsylvania with emphasis upon identification of birds in the field. Lectures deal with internal and external adaptation for aerial travel, classification, migration, habitats, plumage changes, nesting habits, and ecologic relations. Two lectures and three laboratory or field trip hours weekly.

**Biol. 254: Entomology**

3 s.h.

A general study of insects including structure, physiology, classification, economic importance and relationships. A project is required including a collection of and a report on some group of insects. Two lectures and one three-hour laboratory or field trip period weekly. Prerequisites: Biol. 153, 154.

**Biol. 255: Animal Ecology**

3 s.h.

A study of the interrelationships between animals and their environment. Two lectures and one three hour laboratory. Prerequisites: Biol. 153, 154, 263.

**Biol. 256: Field Zoology I**

3 s.h.

This course deals with the study of invertebrates in the field and includes the collecting and preserving of such forms with emphasis on taxonomy. The course meets five hours a day with two extensive field trips required. Students are encouraged to make collections for future classroom use. Given in alternate summers.

**Biol. 257: Field Zoology II**

3 s.h.

This course deals with vertebrate forms (with the exception of birds), emphasis being placed upon ecological importance and taxonomy of the following groups: fishes, amphibians, reptiles, and mammals. The class meets five hours a day. Given in alternate summers.

**Biol. 258: Conservation of Plant and Animal Resources**

3 s.h.

A study of accepted practices in soil, water, forest, and game conservation with a biological approach. Extensive use of state and federal consultants and films. Field trips include two weekends and several all-day trips.

**Biol. 259: Animal Physiology**

3 s.h.

A course designed to give the student a general background of how animals carry on their bodily processes. Two lectures and one three-hour laboratory period weekly. Prerequisites: Biol. 154 and Chem. 154.

**Biol. 261: Vertebrate Embryology**

3 s.h.

A study of the development of the vertebrates, including the formation of germ cells, fertilization, growth and differentiation, and the formation of tissues and organs. One lecture and two double-period laboratories. Prerequisite: Biol. 154.

**Biol. 262: Histology**

3 s.h.

A study of the microscopic structure of tissues comprising the organ system of animals, including man. One lecture and two double-period laboratories. Prerequisite: Biol. 154.

**Biol. 263: Zoology****4 s.h.**

A course designed to give a deeper understanding of the phylogenetic relationships of the invertebrates and vertebrates. The principles of organic evolution, animal classification, and levels of organization are stressed. Two hours lecture and four hours laboratory weekly.

**Biol. 264: Botany****4 s.h.**

Principles of classification and phylogeny in the plant kingdom from bacteria to angiosperms. Introduction to the nature of plant communities. Two lecture and four laboratory hours weekly. Prerequisite: At least one semester of biology (General Biology, Basic Biology or equivalent).

**Biol. 265: Plant Physiology****3 s.h.**

A study of fundamental principles of plant physiology including photosynthesis, translocation, growth, development, and the effects of environmental parameters such as isolation, temperature, and water on plants. Prerequisites: Biol. 264, Chem. 251.

**Biol. 351: Field Botany****3 s.h.**

Collection and preparation of plants using herbarium methods. Emphasis on identification of flowering plants in a variety of habitats. Alternate summers. Prerequisite: Biol. 264.

**Biol. 352: Plant Ecology****3 s.h.**

A study of the structure, development, and causes of distribution of plant communities based upon individual studies of the major plants in each group. Emphasis upon plant associations in western Pennsylvania visited during the course. Given in alternate summers. Prerequisite: Biol. 264.

**Biol. 353: Comparative Vertebrate Anatomy****3 s.h.**

The course traces the most important trends in the evolution of basic structures in vertebrate lines, and conveys an appreciation of how the mammals came to possess the combination of characters that make this group unique. Emphasis is upon evolution and continuity of structure. Laboratory work includes comparative dissection of the dog, fish, shark, Necturus, and the cat. One lecture and two double periods of laboratory weekly. Prerequisites: Biol. 153, 154 and 263.

**Biol. 354: Microbiology****3 s.h.**

A study of microorganisms including viruses, molds and bacteria. Culturing, isolation, classification and ecology of microscopic life from air, water, soil, and dairy products including beneficial and pathogenic forms. One lecture and two two-hour laboratory periods weekly. Prerequisites: Two semesters of Biology and Chem. 154.

**Biol. 355: Parasitology****3 s.h.**

A study of parasites in relation to man and his domesticated animals. Emphasis is placed on morphology and life histories in addition to the ecology of the parasite. Two lectures and three laboratory hours weekly. Prerequisites: Biol. 153, 154.

**Biol. 356: Genetics****3 s.h.**

A study of principles of inheritance in plants and animals. The primary experimental organism is the fruit fly. Observations on the results of human heredity are introduced. Experiments and problematics are used to demonstrate the laws of heredity; elementary statistics are employed as a means of evaluation. One lecture and two double periods of laboratory weekly. Prerequisites: Biol. 153 and 154.

**Biol. 357: Taxonomy of Vascular Plants** 3 s.h.

Systems of classification; collection and identification of flowering plants and ferns of the region; use of keys and herbarium collections. Summers only. Prerequisite: Biol. 264.

**Biol. 360: Problems in Biology** 3 s.h.

Acquaints the student with skills and techniques used in research. Each student selects a problem for investigation and completes all phases including writing a research report. Admission by approval of the instructor.

## CHEMISTRY

**Chem. 151: Inorganic Chemistry I** 5 s.h.

This course includes a chemical study of the structure and behavior of matter. Topics stressed are experimental evidence for the structure of atoms, electronic orbitals as related to chemical bonding, the periodic law, stoichiometrical relationships in problems and reactions, oxidation and reduction, gas laws, ionization, acids and bases.

**Chem. 152: Inorganic Chemistry II** 5 s.h.

This course continues the study of properties and uses of elements and their compounds as related to electronic structures; the study of colligative properties of solutions; and the qualitative analysis of the cations and anions.

**Chem. 153: General Chemistry I** 4 s.h.

This course includes a chemical study of the structure and behavior of matter. Topics stressed are experimental evidence for the structure of atoms, electronic structure and bonding, chemical periodicity, gas laws, solutions and their colligative properties. The mole concept in problem solving is stressed throughout the course. The course is primarily for liberal arts students not majoring in chemistry and for biology majors. Chemistry majors should schedule Chem. 151.

**Chem. 154: General Chemistry II** 4 s.h.

Chemistry 154 is the sequential course to Chemistry 153. Major units presented are ionization, acids, bases and salts, redox reactions, and electro-chemistry. Chemical equilibrium pertaining to pH, buffer solutions, and solubility is stressed. The course is primarily for liberal arts students not majoring in chemistry and for biology majors. Chemistry majors should schedule Chem. 152. Prerequisite: Chem. 153.

**Chem. 251: Organic Chemistry I** 4 s.h.

The study of the nomenclature, preparation and properties of aliphatic and aromatic hydrocarbons and the reactions of the functional groups including alcohols and halides. Stereochemistry, aromaticity, reaction rates, and mechanisms. Prerequisite: Chem. 151, 152, or 153, 154.

**Chem. 252: Organic Chemistry II** 4 s.h.

A continuation of Chem. 251. A discussion of the reactions of the functional groups including aldehydes and ketones, carboxylic acids and derivatives, diazonium salts, nitro compounds and amines. Condensation reactions, carbohydrates and polymerization. Prerequisite: Chem. 251.

**Chem. 253: Photography****3 s.h.**

Practice in the photographic techniques of picture taking, composition, and processing constitutes the major part of this course with some emphasis on the physics of the camera and the chemistry of the film and photographic processing. Not counted toward chemistry or science majors.

**Chem. 255: Industrial Chemistry****3 s.h.**

This course deals with the application of theories, laws, and calculations of chemistry to industrial processes. The class work is supplemented by reading of current literature and trips to chemical industries.

**Chem. 258: Laboratory Techniques in Chemistry****2 s.h.**

This course includes elements of glass blowing, purification of compounds, preparation of standard solutions, laboratory planning, and the use of the library.

**Chem. 352: Quantitative Analysis****3 s.h.**

This course gives introductory training in the theory and practice of gravimetric, volumetric, electrolytic, and potentiometric analysis. Quantitative calculations and relations are stressed. Prerequisite: Chem. 152.

**Chem. 354: Physical Chemistry I****4 s.h.**

This course is an introduction to the fundamental principles of theoretical chemistry with application in the solution of problems and training in the techniques of physical-chemical measurements. Prerequisite: Math. 351.

**Chem. 355: Physical Chemistry II****4 s.h.**

The rates of reactions and chemical thermodynamics form the chief topics of this course. Prerequisite: Chem. 354.

**Chem. 451: Inorganic Synthesis****3 s.h.**

Preparation of a variety of substances ranging from elements to coordination complexes is a major area of study. Techniques of inorganic synthesis and purification are emphasized, and preparations and procedures which are illustrative of modern theory of inorganic chemistry are considered. Prerequisite: Chem. 256.

**Chem. 453: Biochemistry****3 s.h.**

An introduction to modern cellular biochemistry. A study of the structure and chemistry of proteins and nucleic acids and the metabolic transformations of carbohydrates and lipids and protein synthesis. Prerequisite: Chem. 251.

**Chem. 454: Water Analysis****2 s.h.**

This course is a study of the impurities commonly found in water sources. The analysis for these impurities and elimination of them to prepare water for domestic consumption, industrial use, and aquatic life constitute the laboratory work.

**Chem. 456: Advanced Inorganic Chemistry I****4 s.h.**

The gross properties of molecules as well as their internal structure is studied as a function of the electronic structures of the component atom. Special attention is given to bond energies, ionic crystals, inorganic nomenclature, magnetochemistry and molecular structure and nuclear reactions.

**Chem. 457: Instrumental Analysis**

3 s.h.

Topics discussed in this course are properties observable for analysis and optical methods of analysis such as visual colorimetry, photoelectric colorimetry, fluorescent methods, turbidimetry and nephelometry, ultra-violet, visible, and infra-red spectrophotometry. The laboratory work is the unifying element of the course and includes work with the types of instruments mentioned above.

**Chem. 459: Demonstrations in Chemistry**

3 s.h.

Studies are made of various demonstration techniques with students devising and applying each with many examples. Special attention is given to the study of the material of the CHEM. Study Committee of the American Chemical Society prepared for the purpose of vitalizing high school chemistry courses.

**Chem. 460: Radiation Techniques**

2-3 s.h.

Emphasis is placed on a program of independent study undertaken in the field of radiation chemistry under the direction of a member of the chemistry faculty. Representative topics included in the course are characteristics of isotopes, half-life, detection instruments, analytical applications and health physics problems. By arrangement.

## ECONOMICS

No accounting course can be used to satisfy the basic education requirements of one course in economics or sociology. In the fields of Social Studies or Social Science accounting courses do not satisfy the requirements in economics. Accounting courses are to be taken as electives only.

**Econ. 151: Principles of Accounting I**

3 s.h.

Basic accounting principles and concepts; organizing, measuring, summarizing and reporting financial data.

**Econ. 152: Principles of Accounting II**

3 s.h.

Basic accounting concepts and techniques currently employed in contemporary business practice. Analysis and interpretation of accounting data. Prerequisite: Econ. 151.

**Econ. 211: Principles of Economics I**

3 s.h.

Introduction to economics, national income analysis, money and banking, monetary and fiscal policy.

**Econ. 212: Principles of Economics II**

3 s.h.

Pricing inputs and outputs, degrees of competition, distribution, and special economic groups. Prerequisite: Econ. 211.

**Econ. 251: Intermediate Accounting I**

3 s.h.

Emphasis on contemporary accounting theory and procedure; concepts of profit and loss measurement; accounting for current and non-current assets and liabilities. Prerequisite: Econ. 152.

**Econ. 252: Intermediate Accounting II**

3 s.h.

Accounting for the formation and capital structure of business organizations; special statements and statement analysis. Prerequisite: Econ. 251.

**Econ. 301: Cost Accounting**

3 s.h.

Concepts of cost accounting procedures, control and analysis. Prerequisite: Econ. 252.

<b>Econ. 302: Tax Accounting</b>	<b>3 s.h.</b>
Problems involved in federal income taxation of individuals and business organization. Prerequisite: Econ. 252 or permission.	
<b>Econ. 350: Microeconomic Theory</b>	<b>3 s.h.</b>
Basic concepts of microeconomic theory. The behavior of consumers, producers, and markets. Prerequisites: Econ. 211 and 212.	
<b>Econ. 352: Aggregative Economics</b>	<b>3 s.h.</b>
National income accounting and analysis; economic indicators and measures; fluctuations and growth; the role of money in a dynamic economy; forecasting for the economy and the firm; and problems of public policy. The objective of this course is to develop in the student an awareness of the impact of dynamic forces on economic activity in general and specifically on the decisions which must be made by individuals and firms. Prerequisites: Econ. 211 and 212.	
<b>Econ. 353: Elements of Statistics</b>	<b>3 s.h.</b>
The collection, analysis, interpretation, and presentation of statistical data. Frequency distribution, reliability, time series, and cyclical movements are studied. Emphasis is placed on the correlation, forecasting, and index numbers of statistical nature. Prerequisite: Economics 211.	
<b>Econ. 354: Money and Banking</b>	<b>3 s.h.</b>
The nature of money and deposit credit, central banking, the U. S. banking system, the Federal Reserve System, the Treasury Department, and the U. S. monetary and fiscal policies make up the main part of this course. Prerequisites: Economics 211 and 212.	
<b>Econ. 355: Industrial Relations</b>	<b>3 s.h.</b>
A study of union history, structure, and functions in the United States' economy. Collective bargaining, labor laws, and government policies toward labor are included. Management reaction to organized labor unions and related labor problems are stressed. Prerequisites: Economics 211 and 212.	
<b>Econ. 356: Government Regulations</b>	<b>3 s.h.</b>
An examination of the major economic problems arising from public interest in competition, business practices, and labor. The anti-trust laws and regulations are included. Prerequisites: Economics 211 and 212.	
<b>Econ. 357: Public Utilities</b>	<b>3 s.h.</b>
An analysis of public policies and methods regarding industries with a public interest with emphasis on transportation, power, and communication. The study of legal and financial aspects of public utilities are part of this course. Prerequisites: Economics 211 and 212.	
<b>Econ. 358: International Economic Relations</b>	<b>3 s.h.</b>
Theory and practice of international trade. Balance of payments, foreign exchange, national commercial policies, international investment, and foreign aid are considered. Prerequisites: Economics 211 and 212.	
<b>Econ. 359: Public Finance</b>	<b>3 s.h.</b>
A study of the American tax structure—federal, state, and local governments—and of the economic effects of various types of taxes and of government fiscal policy. Prerequisites: Econ. 211 and 212.	

**Econ. 360: Comparative Economic Systems** 3 s.h.  
 Analysis of alternative patterns of economic control, planning, and market structure. Experiences under capitalism, socialism, and mixed economics are compared and evaluated. Prerequisites: Econ. 211 and 212.

**Econ. 401: Governmental Accounting** 3 s.h.  
 Accounting for governmental and institutional organizations. Prerequisite: Econ. 252 or permission.

**Econ. 450: Managerial Economics** 3 s.h.

The purpose of this course is to show how economic analysis can be used in formulating business policies. The topics studied are: elements of decision theory and criteria for decision-making by the firm; output and "scale" decisions; linear programming; concepts of profits, production and cost functions, equilibrium (industry and firm) competition; demand theory; pricing policies; capital budgeting and investment decisions; analysis of uncertainty; and inventory management. Prerequisites: Econ. 211 and 212.

**Econ. 451: Business Cycles** 3 s.h.

Theories of business fluctuations; applications of modern income theory to business cycles; patterns of cyclical behavior and of long-term economic change. Implications for public policy. Prerequisite: Econ. 359.

**Econ. 452: History of Economic Thought** 3 s.h.

This course traces the development of economic ideas from ancient times down to the present, with special emphasis on the period beginning with Adam Smith. Attention is given to the economic and political environment in which the ideas emerged and to important biographical details of some of the leading economists who advanced or held the ideas. Prerequisite: Economics 211 and 212 and Senior Standing.

**Econ. 453: Economics Seminar** 3 s.h.

This seminar deals with topics and problems in the field of economics which have been omitted or treated briefly in the formally organized course offerings. The topics to be analyzed will depend on the interests as well as preparation of the students. Students will be required to do independent work and make oral and written reports. Prerequisite: Economics Major and Senior standing.

## EDUCATION

**Ed. 221: Developmental Reading** 3 s.h.  
 A broadly based course which emphasizes improvement in rate, comprehension, reading taste, and independence in quality and quantity of reading. Students are introduced to wide and varied sources of reading and numerous means of improvement in reading skills. Instruction in theory and an introduction to the possibilities of a supplementary mechanical program for reading improvement are included. Prerequisite: Ed. 333 or El. Ed. 323.

**Ed. 223: Social Foundations of Education** 3 s.h.  
 An introductory course to the social, historical, and philosophical foundations of education and to the relationship between schools and American society. Requirements and opportunities of professional careers in education are related to undergraduate and graduate programs of teacher preparation.

**Ed. 224: Educational Tests and Measurement** 3 s.h.  
 Professional techniques or educational testing procedures applied to the administration, construction, interpretation, and statistical computation of educational measurements. A first course.

**Ed. 310: Psychology of Reading Instruction 2 s.h.**

The course is to familiarize the student with the basic factors essential to effective and efficient reading. It is an overview of the functional and psychological learning skills related to reading. Required of secondary education majors who have not scheduled Ed. 333, 221, 425, 426, or El. Ed. 323.

**Ed. 321: Methods of Teaching and Evaluating English 3 s.h.**

This course gives consideration to the following: (1) the place of English in the curriculum of the free public school in America; (2) specific procedures for teaching and evaluating oral and written composition, English usage, and literature; (3) the school-wide English program; and (4) the administration of the school paper and the yearbook.

**Ed. 322: Methods of Teaching and Evaluating French 3 s.h.**

This course includes training in phonetics as well as in teaching procedures currently considered most effective at the secondary and also the elementary levels. Prerequisite: French 251.

**Ed. 323: Methods of Teaching and Evaluating Geography 3 s.h.**

A survey of available materials and current curricula in the field of geography form the basis for an analysis of modern techniques in the teaching of geography. Emphasis is placed on the nature, scope, and contributions of geography to general education. Time is devoted to the evaluation of recent textbooks, supplementary readers, government publication, magazines, maps, and pictures. The development of the best methods, techniques, and skills in the use of all teaching aids and in the guiding of pupils in their study is the leading objective of the course.

**Ed. 324: Methods of Teaching and Evaluating Mathematics 3 s.h.**

Place and function of mathematics in secondary education; content and the improvement and evaluation of instruction in mathematics; acquaintance with current literature and research; observation in secondary schools. Prerequisite: 9 hours of college mathematics.

**Ed. 325: Methods of Teaching and Evaluating Science 3 s.h.**

This course is planned to give the prospective science major a thorough grounding in the problems of teaching science. The objectives of the science program in the secondary school, selection of textbooks, sources of suitable literature, how to secure materials for instruction, the preparation of units, and special techniques are studied. Prerequisites: 12 hours of work in major field.

**Ed. 326: Methods of Teaching and Evaluating Social Studies 3 s.h.**

This course is intended to familiarize prospective teachers with desirable methods which may be used in teaching the social studies. Emphasis is placed on the philosophy, objectives, course of study, and organization of subject matter for teaching purposes, curriculum materials, procedures and development.

**Ed. 327: Methods of Teaching and Evaluating Spanish 3 s.h.**

Materials, methods, and problems are covered in the teaching of Spanish on the secondary level. Observations and readings in methodology are extra-class activities.

**Ed. 328: Methods of Teaching and Evaluating Speech 3 s.h.**

A methods course designed to prepare seniors for student teaching. Consideration is given to such areas as: the place of speech in education, classroom procedures, diagnosis of speech needs, criticism of classroom speaking, evaluation of results of instruction, and supervision of extra-curricular activities. Prerequisites: 13 credits in Speech including Sp. 113.

**Ed. 329: Audio-Visual Communication** 2 s.h.

Audio-Visual Communication is the study of educational theory and practice concerned with the design and use of messages which control the learning process.

**Ed. 333: Teaching of Reading—Secondary** 3 s.h.

An overview of the physiological and psychological aspects of reading and methods applicable for group and individual instruction at the junior and senior high school levels. English majors who wish to qualify for certification in reading should schedule this course as a prerequisite to all other courses in reading.

**Ed. 422: Professional Practicum Including School Law** 2 s.h.

Special attention to the practical application of techniques of teaching and classroom management, comparison of techniques in specialized areas, typical problems encountered in student teaching, general principles of school law, and Pennsylvania school laws pertaining to the work of the classroom teacher. Limited to student teachers except by special arrangement.

**Ed. 423: Library Practice and Student Teaching** 12 s.h.

Two major assignments are required: the equivalent of one half time in public school library practice and the equivalent of one half time in classroom academic teaching, both under the supervision of approved cooperating librarians and teachers in public school student teaching centers affiliated with the college.

**Ed. 424: Secondary Student Teaching** 12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work in the area of the student's specialization. Assignments for secondary student teaching are completed at off-campus public school student teaching centers associated with the college.

**Ed. 425: Diagnostic and Remedial Reading** 3 s.h.

Provides theory and practicum for the remediation of reading problems in the classroom, including skills, the use of tools, and methods with which to discover and correct the physical, emotional, and mental factors involved in reading problems. Prerequisite: El Ed. 323 or Ed. 333 or Teaching Experience.

**Ed. 426: Reading Problems in the Secondary School** 3 s.h.

Consideration of the students who have reading disabilities. It proposes to prepare the teacher to plan corrective procedures which will eventuate the return of the student to his appropriate level of reading and comprehension in the diversified and comprehensive reading needs of the secondary school. Prerequisite: Ed. 333.

**Ed. 431: Teaching the Exceptional Child** 3 s.h.

A consideration of the problems connected with the education of the non-typical child—the mentally handicapped, the gifted, the blind, the deaf, the crippled, speech defective, and socially maladjusted. The selection, construction and adaptation of learning aids and materials.

## ELEMENTARY EDUCATION

**El Ed. 231: Creative Activities** 3 s.h.

Exploration of the nature and value of creativeness, together with classroom opportunities for its development. Consideration of the unit of work and the guidance of children in creative learning and expression. Student participation in individual and group projects by which they demonstrate how creativeness can be fostered in the elementary school.

**El Ed. 321: Child Development**

3 s.h.

Acquisition of understanding and appreciation of the mental, physical, social and emotional aspects of development. Emphasis on techniques of motivation, principles of learning, the role of individual differences, and environmental factors affecting attitudes, personalities, growth and intellectual interests. Lectures, discussions, readings, and reports required.

**El Ed. 323: Teaching of Reading**

3 s.h.

An overview of the physiological and psychological aspects of reading and the materials and methods applicable for group and individual instruction in the elementary grades.

**El Ed. 324: Teaching of Arithmetic**

3 s.h.

This is a combination of a methods course and a professionalized subject matter course. Emphasis is placed upon the scope and sequential development of the arithmetic program, meaningful instruction in arithmetic, and available materials for implementing the arithmetic program. Problem solving, diagnostic work, and testing are stressed.

**El Ed. 325: Modern Curriculum and Methods**

5 s.h.

An integrated course coordinating theory and practice in the teaching of social studies, language arts, and health and physical education. Methods and materials applicable to unit type teaching, to the core curriculum, and to more traditional formations of the school are developed as emphasis is placed on the selection, organization, and evaluation of experiences and materials for elementary school children.

**El Ed. 332: Nursery-Kindergarten Education**

3 s.h.

Study of the function of pre-school and kindergarten programs in relation to the growth and development of children with a consideration of developmental and environmental influences on emotional problems. Study of the curriculum, physical environment, and such areas as music, literature, arts, science, creative expression, home-school relations, and dramatic play. Campus school experiences, directed reading, and films. Prerequisite: El. Ed. 321.

**El Ed. 422: Professional Practicum Including School Law**

2 s.h.

Problems, practices, and regulations attending student teaching professional experiences. Coordination of the student teaching program with the educational objectives of the student teaching centers. Pennsylvania school laws relevant to the work of the beginning elementary school teacher. Practical interpretations of professional ethics and the functions of professional organizations.

**El Ed. 424: Elementary Student Teaching**

12 s.h.

Observation and participation in teaching and in activities related to the performance of a teacher's work. The semester's program is divided into two student teaching assignments involving experience at two grade levels. Most assignments for elementary student teaching are completed at public school off-campus student teaching centers associated with the College.

## ENGLISH

**Eng. 111: Composition I**

3 s.h.

This course emphasizes library orientation research writing, composition style and usage, and the reading of literary types. In sections which require it, remedial work is done in punctuation, basic grammar, and spelling.

**Eng. 112: Composition II**

3 s.h.

The course affords further practice in effective writing. Stress is placed on the organization of various types of expression through reading, discussion, and interpretation of selected literature. Continued functional practice in mechanics is taught when deemed necessary by the instructor. Reading includes study of two novels. Pre-

requisite: Eng. 111.

**Eng. 213: Introduction to Literature**

3 s.h.

As an introduction to literature, this course is designed to provide opportunities for extensive reading which will familiarize students with the development of human thought as it has found expression in the recognized literary masterpieces of all times and peoples.

**Eng. 251: English Literature**

3 s.h.

The course in English Literature is a survey of the literature of England beginning with *Beowulf* and moving through each literary and historical period. Representative selections from the recognized great in the literature of England are read. Emphasis is placed on the influence the history of the country has had upon its literature.

**Eng. 252: American Literature**

3 s.h.

The work in American literature is a survey of the literature and the social history of America. Samples of significant work from American writers are studied.

**Eng. 253: Philology and Grammar**

3 s.h.

The course is devoted, first, to an intensive study of formal English grammar and, second, to a consideration of the historical background of the English tongue and the major sources of English vocabulary.

**Eng. 254: American Prose**

3 s.h.

The course in American prose considers both fiction and non-fiction work representative of American thinking and writing. Attention is given to social, political, and intellectual background related to selections studied.

**Eng. 255: Pre-Shakespearian Literature**

3 s.h.

This course is a study of the development of literature in England prior to 1600. Particularly treated are *Beowulf*, the Arthurian epics, Chaucer, Spenser, and the medieval drama.

**Eng. 256: Seventeenth Century Literature**

3 s.h.

The course consists of study of John Milton and other important writers such as Bunyan, Walton, Donne, and various Cavalier and Puritan poets. The relation of the literature to the social, religious, and political history of the century is emphasized.

**Eng. 257: The Novel to 1870**

3 s.h.

The development of the novel in English as a major literary form is traced from its beginning in the mid-eighteenth century to Hardy and Twain through the reading and analysis of representative novels.

**Eng. 258: Short Story**

3 s.h.

The work of this course consists of lectures on the historical development of the short story followed by an intensive study of representative types. Class work is supplemented by extensive individual reading.

**Eng. 259: Journalism**

3 s.h.

A survey which provides theory and practice for all students who are interested in writing and other forms of journalism. Class contact with professional journalists and actual situations aids in bridging the gap between textbook theory and actual journalism practice.

**Eng. 331: Children's Literature**

3 s.h.

A study of the best in children's literature, both old and new, and the age when it is most appreciated. Students are acquainted with the history of children's literature, authors, illustrators, children's periodicals, and sources available for book selection. Wide reading of children's books, story telling, and oral reading are required. Recommended for elementary majors.

- Eng. 351: Advanced Composition** 3 s.h.  
 Advanced composition emphasizes writing experience in critical, expository, descriptive, argumentative, and creative work through intensive study of examples, frequent papers, and critical discussion of students' work.
- Eng. 352: American Poetry** 3 s.h.  
 The course is devoted to a study of the work of poets representative of American culture from the colonial period to the present.
- Eng. 353: Shakespeare** 3 s.h.  
 The work of this course is a study of selected comedies, tragedies, and historical plays by Shakespeare, together with the social, historical, and literary background necessary for their full appreciation.
- Eng. 354: Eighteenth Century Literature** 3 s.h.  
 Representative works of major Restoration and eighteenth century writers, such as Pepys, Dryden, Swift, Addison, Steele, Pope, Johnson, and Goldsmith, are considered in relation to the social, political, and intellectual climate of the age.
- Eng. 355: Novel since 1870** 3 s.h.  
 Through lectures and discussions the course examines trends in the development of the English and American novel since 1870. Six to eight representative novels are intensively studied.
- Eng. 356: English Romantic Literature** 3 s.h.  
 The major works of Wordsworth, Coleridge, Byron, Shelley, Keats, and their contemporaries are considered and related to the intellectual, political, and social currents of the time.
- Eng. 451: Contemporary Poetry** 3 s.h.  
 This course in contemporary poetry is devoted to consideration of representative verse published in both England and America since 1870.
- Eng. 452: Modern Drama** 3 s.h.  
 A comprehensive view of the best dramatic literature of the modern American and British theater since 1890 is presented through lectures, discussion, and experiences related to the contemporary stage.
- Eng. 453: Chaucer** 3 s.h.  
 The course is an intensive study of **The Canterbury Tales** and **Troilus and Criseyde** together with Chaucer's English and continental background.
- Eng. 454: Victorian Literature** 3 s.h.  
 The course in Victorian literature begins with a study of the many economic, social, religious, and political problems that disturbed nineteenth century England. The work of the major poets, essayists, and novelists is studied with particular care. Among the poets, Tennyson and Browning and the Pre-Raphaelites are given close attention. Novels representative of a half dozen of the most important fiction writers of the period are read and discussed.
- Eng. 455: Criticism** 3 s.h.  
 The course is a historical study of literary criticism and aesthetic theory with emphasis upon modern trends.
- Eng. 456: English Honors Seminar** 3 s.h.  
 Devoted to intensive study of selected writers and their works, the seminar is designed to offer excellent students opportunities for advanced and unusually challenging study in literature. Admission by departmental invitation.
- Eng. 457: Introduction to Linguistics** 3 s.h.  
 The course presents the essentials of descriptive, historical, comparative, and structural linguistics and demonstrates the interrelationship between linguistics and other fields such as phonetics, semantics, and foreign languages. The course offers students an opportunity to increase their functional knowledge through study of vocabulary, tools, and applications of linguistics.

**Eng. 458: History of the English Language** 3 s.h.  
 The history of the English language; a study of its origins and changes in structure, usage, pronunciation, spelling, vocabulary, and meaning.

**Eng. 459: Old English Language and Literature** 3 s.h.  
 An introduction to the essentials of Old English grammar; readings in simple Old English prose and poetry.

## FRENCH

**Fr. 151: French I (Elementary I)** 4 s.h.  
 Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until French 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

**Fr. 152: French II (Elementary II)** 4 s.h.  
 Continuation of French 151, with increasing emphasis on graded reading material. Prerequisite: French 151, or permission of the instructor.

**Fr. 153: Elementary French Conversation** 3 s.h.  
 Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for French 251 but are lacking in aural-oral proficiency. May be taken concurrently with French 251.

**Fr. 251: French III (Intermediate I)** 3 s.h.  
 Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: French 152; or two years of high school study and/or a satisfactory placement test score.

**Fr. 252: French IV (Intermediate II)** 3 s.h.  
 Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: French 251; or three years of high school study and/or a satisfactory placement test score.

**Fr. 255: French Civilization I** 3 s.h.  
 A survey of French geography, history, literature, and culture, designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisites: French 252; or four years of high school study and/or a satisfactory placement test score.

**Fr. 256: French Civilization II** 3 s.h.  
 Continuation of French 255, which is prerequisite. These two courses are required of all majors.

**Fr. 351: Advanced French Grammar and Composition** 3 s.h.  
 Intensive oral and written drill with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-French translation, free composition, and conversation on everyday topics. Prerequisites: Same as for French 255.

**Fr. 353: The Modern French Drama** 3 s.h.  
 French drama from the 1890's to the present day. Playwrights principally treated are Maeterlinck, Claudel, Cocteau, Giraudoux, Anouilh, Sartre, Camus, Beckett, and Ionesco.

**Fr. 354: The Modern French Novel** 3 s.h.  
 A study of seven major French novelists of the 20th Century: Proust, Gide, Malraux, Mauriac, Sartre, Camus, and Bernanos.

- Fr. 355: French Romanticism** 3 s.h.  
A study of French Romanticism from Chateaubriand to the Revolution of 1848. Major figures: Chateaubriand, Stendhal, Balzac, and Hugo.
- Fr. 356: French Poetry from Baudelaire to Surrealism** 3 s.h.  
A survey of the major trends in French poetry from Baudelaire to the early 20th Century, particularly Baudelaire, Rimbaud, Verlaine, Mallarmé, and Valéry.
- Fr. 357: The French Realistic Novel** 3 s.h.  
A study of French realism and naturalism from the Revolution of 1848 to 1900. Major figures: Balzac, Flaubert, Zola, and Daudet.
- Fr. 358: The Literature of the Age of Enlightenment** 3 s.h.  
Reading of essays, drama and fiction of the 18th Century. Major figures: Montesquieu, Voltaire, Diderot, and Rousseau.
- Fr. 359: The Literature of the Classical Age** 3 s.h.  
Classical French philosophy, drama and poetry: Corneille, Racine, Molière, Pascal, Descartes, La Fontaine.
- Fr. 451: Supervised Readings in French Literature** 3 s.h.  
As the title suggests, the course is devoted to selected readings determined in relation to the needs and interests of the individual major.

## GEOGRAPHY

- Geog. 111: Basic Physical Geography** 3 s.h.  
The aim of this course is to develop a knowledge and appreciation of the elements of the physical environment and man's relationship with them. World patterns of land forms, climate, soils, vegetation, etc., are treated in conjunction with man's use of his material resources.
- Geog. 251: Economic Geography** 3 s.h.  
The production, distribution, and use of the basic commodities of the world; the relationship between the physical factors and economic conditions and the pattern of major occupations; world trade and trade routes, types of carriers, and commodities carried; the discussion of economic landscapes in underdeveloped lands and in the Western world. Prerequisite: Geog. 111.
- Geog. 252: Physical Geology** 3 s.h.  
A study of the earth (minerals and rocks) and the processes, both constructional and destructional, which have shaped it since it was formed. Constructional processes include volcanism, mountain building, and sedimentation. Destructional processes include the erosional activity of streams, glaciers, ground water, waves, and wind. In connection with these topics, an effort is made to acquaint the student with the methods and work of geologists and with some of the research at the frontiers of geology. The course includes a field trip into local areas. No prerequisites.
- Geog. 253: Geomorphology** 3 s.h.  
The physical phenomena as dynamic forces affecting man: land-forms, their origin, and the forces that produced them; soils, minerals, water resources, and their relationship to man. Prerequisite: Geog. 252. (Geology).
- Geog. 254: Conservation of Natural Resources** 3 s.h.  
The use of the nation's resources of water, land, forests, wildlife, minerals, power, and human resources, and their conservation.
- Geog. 255: Trade and Transportation** 3 s.h.  
The interdependence of industries, regions, and nations and the need for efficient transportation and communication; factors influencing the type of transportation used; changes in methods of transportation: the Great Lakes-St. Lawrence Seaway, jet air service, and great circle routes. Prerequisite: Geog. 111.

**Geog. 256: Geography of Pennsylvania**

3 s.h.

A regional analysis of Pennsylvania, emphasizing man's cultural and economic response to environmental factors. Special attention is given to the resources of the state, analyzing their extent, their use, the need for well directed conservation, and the regional planning program of the Commonwealth. Field trips are an integral part of the course. Prerequisite: Geog. 111.

**Geog. 257: Geography of the United States and Canada**

3 s.h.

A regional study of the United States and Canada, considering man's relationship to the physical factors of relief, climate, soil, vegetation and mineral resources. The political structure and their relationships with each other and the rest of the world are analyzed from a geographic viewpoint. Emphasis is placed on Pennsylvania's position in the regional geography of the United States and Canada. Prerequisite: Geog. 111.

**Geog. 258: Historical Geology**

3 s.h.

The course deals with the interpretation of the record of the rocks and the geologic history of the earth with emphasis on North America. The physical history of the continent and the development of life, especially backboned forms, are discussed. Regional geologic history is illustrated by selected areas, notably Appalachia. Prerequisite: Geog. 252 or 111.

**Geog. 259: Map Interpretation**

3 s.h.

A broad study of maps, charts, and atlases which is designed to develop an awareness of the great variety of maps available and to promote skill in their use. Emphasis is given to understanding map characteristics and properties needed for effective map usage, projections upon which maps are commonly drawn, co-ordinates and grid systems, map scales, aerial representations of relief, and statistical data.

**Geog. 352: Climatology**

3 s.h.

A systematic study of the climatic regions of the earth, with advantages and limitations of each for human occupancy. The physical aspects of the atmosphere and the regional characteristics of climate are investigated. This course provides a valuable background for courses in Economic Geography, Political Geography, and the regional courses of the earth's continents. Prerequisite: Geog. 111.

**Geog. 353: Descriptive Astronomy**

3 s.h.

The motions of the earth, moon, and planets and their connotations; the nature of the sun; the instruments of the astronomer, with observations of the constellations and types of stars. Special attention is given to magnitudes, spectra, temperatures, stellar atmospheres, giant and dwarf stars, binary and variable stars, and the galaxies.

**Geog. 354: Historical Geography of the United States**

3 s.h.

The natural and cultural regions of pre-Columbian United States and the geography of settlement and regional development of the country to 1890. This course is very desirable for history majors. Prerequisite: Geog. 111.

**Geog. 355: Geography of the Soviet Union**

3 s.h.

This regional study deals with Russia's location, size, surface features, climate, vegetation, soils, mineral wealth, occupations, production, transportation, and government. Russia's future production and economic and political influence are considered. Prerequisite: Geog. 111.

**Geog. 356: Geography of Europe**

3 s.h.

A study of European landscapes and regions which seeks to develop an understanding of the geographic basis of Europe's major economic and social problems. Emphasis is upon western Europe; the Soviet Union is not included in this course. Recommended for majors in history. Prerequisite: Geog. 111.

**Geog. 357: Geography of Asia**

3 s.h.

A regional course stressing the interrelationship of the economic, social, and political life of the people with their spatial environment. Problems of over population, standards of living, natural resources, industry, and government are emphasized. The Soviet Union is not included in this course. Prerequisite: Geog. 111.

**Geog. 451: Cartography**

3 s.h.

A study of the basic concepts in map design and techniques of map construction with special emphasis on actual map compilation and drawing. The course treats the evolution of maps, types of maps and their usefulness, map scales, use of aerial photographs as a source of map data, and the kinds and uses of drafting instruments. Two lectures and three hours laboratory weekly. Prerequisite: Geog. 111.

**Geog. 452: Geography of Latin America**

3 s.h.

A comparative study of the geographical regions of Middle and South America. Latin American relations with the United States and the rest of the world are interpreted through an analysis of the economic, social, and cultural activities of man in relation to the physical factors of his environment. Prerequisite: Geog. 111.

**Geog. 453: Geography of Africa and Australia**

3 s.h.

A regional study of Africa, Australia, and the neighboring islands of the Pacific, showing the social and economic developments of these lands in relation to their physical environment. Their political affiliations, the geographic aspects of colonial problems, land tenure, race, and the significance of production and strategic location are considered. Prerequisite: Geog. 111.

**Geog. 454: World Problems in Geography**

3 s.h.

A study of Political Geography treating geographic factors that influence the character, development, and functioning of political units, especially the national state. The internal areal structure and external relations of nation states are studied as factors of political power. Natural, cultural, and ethnic regions of political areas are brought into focus, including core areas and capitals, dependent areas and colonies, and the communication lines necessary to maintain them. Points and zones of international conflict are connected with the practice of great power politics, and with problems of world peace. Prerequisite: Geog. 111.

**Geog. 455: Meteorology**

3 s.h.

A systematic study of the atmosphere, analyzing the laws and underlying principles of atmospheric change. Students have the opportunity to become familiar with the common weather instruments, to observe and record weather data, to read and interpret weather maps, and to consider the problems of aviation growing out of atmospheric conditions. Prerequisite: Geog. 111.

## GERMAN

**Ger. 151: German I (Elementary I)**

4 s.h.

Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until German 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

**Ger. 152: German II (Elementary II)**

4 s.h.

Continuation of German 151, with increasing emphasis on graded reading material. Prerequisite: German 151, or permission of the instructor.

- Ger. 153: Elementary German Conversation** 3 s.h.  
 Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for German 251 but are lacking in aural-oral proficiency. May be taken concurrently with German 251.
- Ger. 251: German III (Intermediate I)** 3 s.h.  
 Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: German 152; or two years of high school study and/or a satisfactory placement test score.
- Ger. 252: German IV (Intermediate II)** 3 s.h.  
 Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: German 251; or three years of high school study and/or a satisfactory placement test score.
- Ger. 253: Scientific German** 3 s.h.  
 A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: German 251 or equivalent. Science and mathematics majors may substitute this course for German 252.
- Ger. 255: German Civilization I** 3 s.h.  
 A survey of German geography, history, literature and culture, designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisites: German 252; or four years of high school study and/or a satisfactory placement test score.
- Ger. 256: German Civilization II** 3 s.h.  
 Continuation of German 255, which is prerequisite. These two courses are required of all majors.
- Ger. 351: Advanced German Grammar and Composition** 3 s.h.  
 Intensive oral and written drill, with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-German translation, free composition, and conversation on everyday topics. Prerequisites: Same as for German 255.
- Ger. 352: Survey of German Literature through the Classical Age** 3 s.h.  
 Study and discussion of the main trends of German thought and literary expression. Emphasis is placed upon the works of Goethe, Schiller, and Lessing.
- Ger. 353: The Modern German Drama** 3 s.h.  
 German drama from the middle of the 19th Century to the present, covering representative writers of the Realist, Naturalist, and Expressionist movements, as well as selected contemporary writers.
- Ger. 354: The Modern German Novel** 3 s.h.  
 The German novel of the last hundred years with emphasis on 20th Century writers such as Thomas Mann, Franz Werfel, Hermann Hesse, et al.
- Ger. 355: German Romanticism** 3 s.h.  
 The older and younger schools of German Romanticism (Jena, Berlin, and Heidelberg) with emphasis on the revival of folk poetry, and consideration of influences upon American Romanticism. Representative authors: Holderlin, Novalis, Arnim, and Brentano.
- Ger. 358: Classical German Literature:**
- Goethe, Schiller and Lessing** 3 s.h.  
 Goethe's Faust and other great works of the Golden Age of German literature.
- Ger. 451: Supervised Readings in German Literature** 3 s.h.  
 The course is devoted to selected readings determined in relation to the needs and interests of the individual major.

## HEALTH AND PHYSICAL EDUCATION

**HPE 111: Health Education****2 s.h.**

Consideration of the physical and mental equipment of the individual and of the practical application of health knowledge in personal and community living.

**HPE 112: Physical Education I****1 s.h.**

The development and practice of skills and attitudes in seasonal activities which may be carried on in college and after college. Achievement tests are given to determine the needs of the student.

**HPE 121, 221, 321, 421: Physical Education****1 s.h.**

Varied physical education activities for women, including archery, badminton, basketball, bowling, the dance, golf, skiing, swimming, tennis, and volleyball. Two hours per week.

**HPE 211: Physical Education II****1 s.h.**

A continuation of Physical Education I with greater emphasis and active participation in activities learned in Physical Education I.

**HPE 212: Physical Education III****1 s.h.**

Specialization in selected activities aimed to bring personal performance ability to advanced levels.

**HPE 223: Physical Education****1 s.h.**

A course especially designed for Elementary majors with emphasis upon activities related to the elementary school. Required for all men and women majoring in Elementary Education. Two hours per week.

## HISTORY

**Hist. 111: History of Ancient and Medieval Civilization****3 s.h.**

The course includes a survey of prehistoric cultures, the earliest civilizations, and European Medieval civilization to 1648. Its purpose is to present a knowledge of the origins of the broad social, political, intellectual, and economic movements of the past, from which the student may gain an understanding of civilization today.

**Hist. 112: History of Modern Civilization****3 s.h.**

A study of significant movements and events from 1500 to the present. The course emphasizes the interrelationships between cultures of various regions of the world, with major attention to the influence Western European development has exerted on other areas.

**Hist. 211: History of United States and Pennsylvania to 1865****3 s.h.**

A survey course in the history of the United States and Pennsylvania from the beginning of the colonial period to the end of the Civil War. Emphasis is placed on the social, economic, and political development of our nation in general and of our Commonwealth in particular.

**Hist. 212: History of United States and Pennsylvania—1865 to Present****3 s.h.**

A survey course in the history of the United States and Pennsylvania from 1865 to the present. Stress is placed on the impact of the Industrial Revolution on our society, the growth of labor power, our part in World Wars I and II, and the activities of our nation in behalf of international organization.

**Hist. 213: History of the United States and Pennsylvania****3 s.h.**

A survey of United States and Pennsylvania history from the period of exploration to the present. Elementary Education majors are required to take this course in place of History 212.

**Hist. 254: History of Latin America: Colonial Period**

3 s.h.

This course surveys the development of Colonial Latin America from its discovery to 1825. The economic, social, cultural, and political aspects of native Indian, Spanish, and Portuguese civilizations in the Old and New World are given detailed attention.

**Hist. 255: History of Latin America: National Period**

3 s.h.

The main emphasis in this course is on the history of the twenty Latin American countries since 1825. The economic, social, political, and cultural development receives detailed attention. The course also surveys Latin America's international relations with emphasis on U. S.-Latin American relations.

**Hist. 256: History of Pennsylvania**

3 s.h.

A study of the founding and development of Pennsylvania from its colonial beginning to the present time. Emphasis is placed on the social, economic and political development in the different periods of its history. Special attention is given to the diversity of the people, their institutions and problems, and the growth of Pennsylvania to a leading position in our modern industrial world.

**Hist. 257: History of the Near East**

3 s.h.

This survey is an area study of the early classical era by way of an advanced intensive exploration of the civilizations in the Mediterranean East and the Middle East. After an introduction to the religions of Judaism and Christianity in their political setting, the cultural contributions of the Semites, Greeks, and Romans are examined. The Islamic Age is stressed. Emphasis is placed upon modern identification of the countries that make this an explosive part of the world—Jordan, Israel, Lebanon, Iran, Iraq, Arabia, Syria, Egypt, Turkey. Their relationship to the great powers is given attention.

**Hist. 258: History of Asia—Ancient and Medieval**

3 s.h.

The course is a study of the foundation of the cultures and the development of the civilizations of the people of India, Imperial China, Colonial Southeast Asia, Korea, and Japan. The influence and importance of ideas in this area are traced and emphasized from the ancient setting of early classic China to the collapse of the Ch'ing dynasty in China and to the close of the Tokugawa shogunate in Japan. Prerequisite: 12 semester hours of Social Studies.

**Hist. 259: History of Asia—Modern**

3 s.h.

The course covers the recent political and commercial history of Asia from the Portuguese expansion in China in the sixteenth century to the penetrating influence of the United States of America in Japan, Korea, Republic of the Philippines, and Vietnam in the twentieth. India, Southeast Asia, and Japan are examined in the age of imperialism. Colonialism and nationalism in all the peripheral areas of modern East Asia receive marked attention. The rise of the Chinese Republic, European powers in Asian politics, the Peoples' Republic of China, Taiwan, Indonesia, and Malaysia are topics treated. Recognition is given to the food-population dilemma and the clash of ideologies. Prerequisite: 12 semester hours of Social Studies.

**Hist. 349: Ancient History**

3 s.h.

This course is the story of the first phase of Western civilization. From its inception in the great river valleys of the Near East about 3000 B. C. through its adoption by the Greeks, Romans, and Western Europe to the fall of Rome, the origin of institutions and other man made developments are stressed.

**Hist. 350: Medieval History**

3 s.h.

A study of the Middle Ages from the fall of Rome to 1500. Prerequisite: Hist. 111 or consent of the instructor.

**Hist. 351: Renaissance and Reformation History 3 s.h.**

This course is a study of the Renaissance and Reformation with particular emphasis on the important political, social, economic, religious, and cultural forces that emerged during this period of transition and ushered in modern Western Culture. Emphasis is placed on the evolution of modern states, the rise of individualism, and the development of modern religious ideas and institutions.

**Hist. 352: History of Europe from 1660 to 1814 3 s.h.**

A study of the social, economic, political, religious, and cultural experiences of the European people from the Age of Louis XIV through the Napoleonic Wars.

**Hist. 353: History of Europe from 1815 to 1924 3 s.h.**

A study of the social, economic, political, religious, and cultural experiences of the European people from the Congress of Vienna to the death of Lenin.

**Hist. 354: Contemporary American History 3 s.h.**

This course is a study of the development of our nation through the Progressive Era, the First Rooseveltian period, World War I, the New Freedom, the Depression, the New Deal, isolationism, World War II, the Cold War, the Korean War, nuclear diplomacy, Eisenhower Republicanism, the New Frontier of Kennedy, and the Great Society of President Johnson. It includes political, social, and economic developments of the past six decades.

**Hist. 355: Economic History of United States 3 s.h.**

A survey of the economic history of the United States and a study of the relationship of the economic and the political and social factors in the development of America. Prerequisites: Hist. 211 and 212.

**Hist. 356: Contemporary European History 3 s.h.**

In this course the diplomatic background, the testing of the alliances, World War I, and the results of the Treaty of Versailles are emphasized. The various ideologies of government and economics are examined. Europe is placed in its proper setting of world significance.

**Hist. 357: History of England to 1689 3 s.h.**

A comprehensive course in the History of the British Isles to the time of the Glorious Revolution. It is primarily for Juniors who are majoring in English or Social Studies.

**Hist. 358: History of England since 1689 3 s.h.**

A comprehensive course in the cultural, political, and economic history of modern England.

**Hist. 359: History of the American Frontier 3 s.h.**

This course includes the geographic continuity in the westward expansion of United States rather than the chronological. The historical period stressed in this course is from 1607 to 1893, the period when the American frontier was in the process of developing.

**Hist. 360: Colonial America 3 s.h.**

A study of colonial history beginning with the European background of colonization and continuing through the American Revolution. Prerequisites: Hist. 211 or consent of the instructor.

**Hist. 361: History of American Science and Technology 3 s.h.**

This course places emphasis on the historical survey of the development of American science and technology and of their effect on the growth of America's culture. America's contributions to the rest of the world, along the lines of science and technology, are stressed.

**Hist. 365: History of Russia 3 s.h.**

This course is a concise presentation of Russian history from the beginnings of the Russian people up to and including the study of postwar Russia. The political, socio-economic, and intellectual development and periods of conflict are stressed in the light of present-day Russia.

- Hist. 452: Diplomatic History of United States** 3 s.h.  
 A study of American diplomatic history from 1789 to the present. The course traces the development of major foreign policies and studies the national and international factors which influence and determine these policies. Prerequisites: Hist. 211 and 212.
- Hist. 453: Twentieth Century World History** 3 s.h.  
 The significance of events in the present century is brought out in this course by a study of the growth of capitalism, imperialism, totalitarianism, international jealousies, World Wars I and II, and the attempt of the family of nations to find world peace through international understanding.
- Hist. 454: The British Commonwealth of Nations** 3 s.h.  
 An advanced elective course on the formation and career of the British Commonwealth.
- Hist. 455: The Culture of Europe (Educational Tour)** 6 s.h.  
 Recent history and government of selected countries of Europe is stressed. Emphasis is placed upon England, Holland, Germany, Switzerland, Italy, and France as the educational tour develops into the foreign study program. In alternate years the countries of the Balkans, Greece and Turkey, and the countries of Scandinavia, Finland, Sweden, Denmark, and Norway are emphasized. English and German literature, the art and architecture of the Renaissance in Northern Italy, and the agricultural-industrial economy in France receive intensive study. Geographical bases of cultural developments are noted. Recent developments in science, politics, and economics receive attention. The main term paper stems from a problem or project or discovery as observed by each student. This paper is due within 60 days upon the ending of the summer session class abroad.
- Hist. 456: Society and Thought in America to 1865** 3 s.h.  
 The development of society and thought during the colonial and middle periods of American history. Prerequisite: Hist. 211 or consent of the instructor.
- Hist. 457: Society and Thought in America—1865 to Present** 3 s.h.  
 The development of society and thought during the modern period of American history. Prerequisites: Hist. 211 and 212 or consent of the instructor.
- Hist. 458: English Constitutional History** 3 s.h.  
 A consideration of Constitutional government in England from the beginning of English history to the present. The study of governmental powers, political and judicial process, and the relationship of liberty and authority to the individual living under the government is included.
- ## LIBRARY SCIENCE
- L.S. 255: History of Books and Libraries** 2 s.h.  
 Survey of the role and function of libraries as educational institutions in our society, including contributions of books and libraries. Emphasis on issues and trends today. History of printing, the alphabet, early writing, art of illustrating, and book production.
- L.S. 256: Administration of School Libraries** 3 s.h.  
 Study of the objectives and functions of the school library, with emphasis on the instructional materials center concept. Technical and administrative procedures; budget preparation; personnel; space and equipment needs; acquisition, preparation, and circulation of materials (all forms); maintenance of the collection; standards for evaluation of school libraries; relations with other school libraries and the public library. Developing a functional school library program.

**L.S. 257: Basic Reference Sources and Services** 3 s.h.  
Emphasis on the approaches to locating information; criteria for selection of reference materials; examination of reviewing media for new reference aids; and organization of reference service. Study of a selected list of reference works. (Recommended as an elective for non-library science students.)

**L.S. 258: Selection of Library Materials** 3 s.h.  
Familiarity with basic bibliographical tools in the field, including current reviewing media. Structure of the publishing industry; major publishers, editions, and series. Analysis of materials in relation to the needs, interests, and ability level of children and young people. Establishment of policies and criteria for the selection and evaluation of book and non-book materials. Development of a professional collection for the school. Prerequisite to L.S. 358, Library Materials for Children, and L.S. 356, Library Materials for Young People.

**L.S. 259: Art for School Librarians** 1 s.h.  
Development of basic skills and understanding of art and its relationship to good library procedures. Provides practical studio work in the elements of graphic expression, lettering, display and exhibition work, publicity techniques, layout, poster making, printing, book jacket design, bookbinding, and related craft activities.

**L.S. 260: Development and Administration of Libraries** 3 s.h.  
The development of the library as an institution, the concept of a philosophy of librarianship, general principles of administration and their application to the organization and management of different types of libraries. Problems and practices with respect to a library's function, staff, collections, and building.

**L.S. 356: Library Materials for Young People** 3 s.h.  
Survey of young people's literature and related materials, including study of the classics. Amplification and refinement of the principles of selection and evaluation of books, periodicals, and other materials for young people. Reading guidance for this age group with attention to special groups, such as the gifted and retarded reader. Development of general and subject bibliographies, preparation of annotations. Techniques of developing booktalks and book reviews. Prerequisite: L.S. 258.

**L.S. 357: Cataloging and Classification** 3 s.h.  
Acquisition, organization, preservation, and circulation of print and non-print materials for effective service. Principles and methods of descriptive cataloging, the structure and application of the Dewey Decimal Classification, Sears subject headings, Rue-LaPlante subject headings, and the use of printed cards. Utilization of work simplification techniques where applicable. Maintenance of library catalogs—shelf list, divided and unified catalog, the printed book catalog. Preparation of a practice card catalog.

**L.S. 358: Library Materials for Children** 3 s.h.  
Survey of children's literature and related materials. Amplification and refinement of the principles of selection and evaluation of books, periodicals, and other materials for children. Reading guidance for this age group with attention to materials for special groups. Development of general and subject bibliographies, preparation of annotations. Techniques of storytelling and the selection of materials for the story-hour. Prerequisite: L.S. 258.

**L.S. 359: Curriculum Enrichment** 3 s.h.  
Planning for the effective use of library services and materials (all forms) supportive of the school's curriculum. Includes examining school library philosophies and specific objectives of public school systems; developing guidelines for the preparation of a course of study for the library program incorporating desirable library study skills

and attitudes for grades K-12. Gaining experience in the preparation of purposeful lesson plans with supportive activities and resources for instructional use with children and young people. Culminating activities which re-examine the role of the librarian as (1) curriculum worker, (2) media specialist, (3) library administrator, (4) teacher, (5) advisor and stimulator of reading activities for boys and girls.

**L.S. 455: Non-Book Materials as Library Resources**

3 s.h.

Selection, acquisition, organization, storage, and maintenance of non-book materials in libraries and system-wide materials centers. Emphasis is given to those media increasingly important to library collections: motion pictures, filmstrips, slides, transparencies, micro-forms, disc and tape recordings, pictures (art and study prints), maps, and programmed instructional materials. Methods of instruction in the use of such materials are studied. Some materials are heard and/or viewed and evaluated.

**L.S. 456: Administration of the District Materials Center**

3 s.h.

Presentation of the single agency concept of multi-media instructional services through a system-wide center: centralized selection, acquisition, and processing of print and non-print materials for building library resource centers. Survey and evaluation of the possible uses of data processing equipment within the traditional library functions—acquisitions, catalog card production, union catalog, etc. Functions and duties of the personnel involved in the coordination of library services.

**L.S. 457: Independent Study Seminar**

1-3 s.h.

Opportunity for a student to explore in depth a facet of librarianship according to his interest or need under the direction of a faculty member of the department. Special area to be approved by a faculty committee. Development of research techniques, a scholarly paper, or a special project.

**Colloquium**

no credit

A series of library visits, lectures, discussions, film demonstrations, etc., presented by members of the staff and visiting lecturers.

## MATHEMATICS

**Math. 111: Basic Mathematics (Secondary)**

3 s.h.

Mathematics as a search for patterns: patterns in geometry, patterns in arithmetic, new patterns. Mathematics as a way of thinking: symbolic logic, axiomatic method, groups. Mathematics as a tool: probability and statistics, elementary concepts of calculus. Not counted toward major.

**Math. 111: Basic Mathematics (Elementary)**

3 s.h.

Structure of the real number system through set terminology. Trichotomy of number relations established through correspondence of sets. Symbolic relations and operations on sets, Venn diagrams, number operations defined in terms of set operations. Properties of sets and number operations. Treatment of bases other than the decimal system. Prime and composite numbers.

**Math. 151: College Algebra**

3 s.h.

Sets; axioms of the real numbers; fractions, exponents and polynomials; factoring; functions and the function concept; graphical representation of functions and relations; linear and quadratic equations; systems of equations. Prerequisite: one year of high school algebra and one year of high school geometry.

**Math. 152: College Trigonometry**

3 s.h.

Functions of an angle; logarithms; use of tables; radians; identities; trigonometric and exponential equations; solution of triangles by natural functions and logarithms; inverse functions; application of all processes in practical problems.

- Math. 161: College Algebra and Trigonometry** 5 s.h.  
 The course includes consideration of the structure of the complex number system; functions and the range and domain of functions; linear, quadratic, and systems of equations; and inverse functions. Mathematical induction and the binomial theorem will be treated as an adjunct to progressions and series; and permutations, combinations, and probability will be studied. Circular functions will be the basis for the development of trigonometry, which will then consider equations and identities involving trigonometric functions.
- Math. 211: Modern Concepts of Mathematics (Elementary)** 3 s.h.  
 An overview of the real number system with a review of key properties of the system. Axioms of a group, ring, integral domain, and a field are investigated in relation to the various number sets. A consideration of the solution sets of mathematical relations and functions in one and two variables in both equalities and inequalities with graphical interpretations. Classification of sets of points as geometric entities; geometric statements and mathematical logic; and truth sets and valid arguments are considered. Also included are laboratory experimental exercises in elementary probability and statistical inference. Prerequisite: Math. 111 (Elementary).
- Math. 251: Analytic Geometry** 3 s.h.  
 Correlation of algebra and geometry in finding equations of loci and loci corresponding to certain equations; properties of the straight line, the circle and conic sections; rectangular and polar coordinates; transformation of coordinates; parametric equations; a brief introduction to three dimensions. Prerequisites: Math. 151 and 152 or 161.
- Math. 252: Differential Calculus** 3 s.h.  
 Elementary concepts of limits and the derivative; applications of the derivative in problems of maxima and minima, rates, velocity, acceleration; possible introduction of integration as the inverse of differentiation. Prerequisite: Math. 251.
- Math. 253: Advanced College Algebra** 3 s.h.  
 Theory of equations; determinants, matrices; sequences; series; progressions; mathematical induction; complex numbers; permutations and combinations. Prerequisite: Math. 151 or 161.
- Math. 254: College Geometry** 3 s.h.  
 Study designed to establish professional competence in geometry. Subject matter is chosen from plane and solid geometry topics, also from advanced geometry.
- Math. 255: Surveying** 3 s.h.  
 Use of the transit, angle mirror, bpsometer, sextant, and other measuring instruments; simple map making exercises and elementary surveying; construction and use of student-made instruments and teaching devices. Prerequisites: Math. 152 or 161.
- Math. 257: Mathematical Theory of Finance** 3 s.h.  
 Introduction to elementary theory of simple and compound interest with solution of problems in annuities, sinking funds, amortization, installment buying, mathematics of life insurance. Prerequisites: Math. 151 or 161.
- Math. 261: Advanced Analytic Geometry** 3 s.h.  
 Parametric equations and geometric properties and construction of conics. Various coordinate systems, frames of reference, oblique axes and transformations from rectangular to oblique axes. Linear transforms. Cross ratio and invariance of transformation. Space geometry.
- Math. 351: Integral Calculus** 3 s.h.  
 Integration as the inverse of differentiation; formulas of integration; the definite integral; methods of integration; integration as the limit of a sum applied to areas, volumes, lengths of curves, and other practical problems. Prerequisite: Math. 252.

- Math. 352: Probability and Statistics** 3 s.h.  
 Basic concepts of elementary probability and statistics approached from a mathematical rigorous standpoint; understanding of and ability to use set theory notation and concepts; probability in finite sample spaces; conditional probability; independent trials; sophisticated counting; probability in relation to random variables; means; standard deviations; covariance and correlation; Bernouilli trials; testing hypotheses. Prerequisite: Math. 251 or equivalent.
- Math. 353: Synthetic Geometry** 3 s.h.  
 Extension of competency in geometry; modern problems of the triangle and the circle; further development of rigorous proof; construction based on loci and indirect elements; non-Euclidean geometry. Prerequisite: High school plane geometry.
- Math. 354: Theory of Equations** 3 s.h.  
 Complex numbers; the remainder theorem; algebraic equations and their roots; limits of roots; Rolle's theorem; Descarte's rule of signs; rational roots; Newton's method for integral roots; cubic and quartic equations; the theorems of Sturm and Budan; numerical approximation to the roots.
- Math. 355: History of Mathematics** 3 s.h.  
 Study of the growth of mathematics through the centuries and the men who contributed to it; enrichment of the mathematical background of the students; integration of basic areas of mathematics.
- Math. 356: Modern Algebra** 3 s.h.  
 Number theory and moduli. Integral domains, equivalence and congruence. Boolean Algebra. Groups, properties, sets, and cosets. Fields, rings, and ideals. Matrix Theory. Mathematical structures of logic.
- Math. 357: Modern Geometry** 3 s.h.  
 The postulational and axiomatic approach. Euclidean geometry. Non-Euclidean Geometry, Lemoine and Brocard geometry. Principles of Duality. Curvilinear coordinates on a surface. Envelopes. Systems of curves and topology of surfaces.
- Math. 358: Computer Principles I** 3 s.h.  
 Beginning course in computer programming. Includes introduction to the operation of keypunch and computer; principles of basic machine language programming; functions of input and output instructions, arithmetic instructions, branch and compare instructions; fundamental concepts of programming in SPS (Symbolic Programming System); operations and operands; symbolic addresses; area definitions; modification of instructions and addresses. Emphasis is placed on writing and "debugging" programs.
- Math. 359: Computer Principles II** 3 s.h.  
 Advanced course in SPS programming. Includes indirect addressing; automatic division; symbolic address statements; special branch instructions; SPS subroutines; macro and linkage instructions; "Pick" subroutine; floating point numbers; format of object decks; correction of object decks; components of SPS Basic Processor; and conversion of SPS into machine language. Emphasis is on the writing and analyzing programs. Prerequisite: Math. 358.
- Math. 450: Mathematical Logic** 3 s.h.  
 A one semester course designed to include such topics as the nature of mathematical logic and the propositional calculus. Valid and invalid argument forms are developed with symbolic proofs. The development of truth tables and their relationship to argument forms is displayed. Quantification and its consequences are demonstrated. Sets, Venn diagrams, and their application to arguments and proofs are a part of the development of the course.

**Math. 451: Advanced Calculus**

3 s.h.

A continuation of the calculus to include series; additional work in partial differentiation; multiple integrals; and elementary differential equations. Prerequisite: Math. 351.

**Math. 452: Ordinary Differential Equations**

3 s.h.

Order and degree of ordinary and partial equations. The formation of differential equations. Equations of the first order and methods of solution. Linear equations with constant coefficients. Special higher order equations. Simultaneous equations. Series solution.

**Math. 453: Partial Differential Equations**

3 s.h.

An introductory course to partial differential equations and boundary value problems with the customary applications in mathematical physics. A development of the transform calculus with emphasis on the La Place transform and its use in the solution of both ordinary and partial differential equations is presented. Series solutions are presented and Ergin values and Fourier series studied.

**Math. 454: Theory of Numbers**

3 s.h.

This course considers the integers as an integral domain and develops the axiom of mathematical induction, the fundamental theorem of arithmetic. Consideration is given to number-theoretic functions, Diophantine equations, and Pythagorean triplets. An introduction is made to congruences, linear congruences and congruences of higher degree. A study is made of quadratic residues, and the Quadratic Reciprocity Law. Also considered are Peanos' Axioms for the natural integers and continued fractions.

**Math. 455: Boolean Algebra**

3 s.h.

Introduction to the algebra of sets; Boolean Algebra as a postulational, deductive, mathematical structure; applications of Boolean Algebra to electrical networks, switching circuits, decision theory, and the propositional calculus.

**Math. 456: Mathematical Statistics**

3 s.h.

An introduction to probability and statistics for mathematically sophisticated students capable of using advanced calculus and set theory to solve problems too difficult for practical application of algebra; review of probability and calculus; mathematical expectation; discrete and continuous random variables; probability densities; sampling distributions; point estimations; interval estimation; tests of hypotheses; regression and correlation; analysis of variation; moment-generating functions. Prerequisites: Math. 352 and 451.

## MUSIC

**Mus. 111: Introduction to Music**

3 s.h.

An orientation in musical experience designed to equip the student with knowledge and understanding of music as it relates to the art of daily living. Use is made of recordings, radio broadcasts, concerts, and other media. Required of all teacher education students except Elementary Education majors. No prerequisite courses or special abilities are required.

**Mus. 131: Literature and Materials of Music I (Elementary)**

3 s.h.

The basic vocabulary of music fundamentals needed for the effective study of music: notation, scale structures, intervals, triads and seventh chords, rhythm and meter, phrase and cadence, overtone series, modulation, introductory study of two-and-three-part forms, etc. No prerequisite.

**Mus. 132: Literature and Materials of Music II (Elementary)**

3 s.h.

A study of modern methods and materials for the effective teaching of music in the elementary grades. Also includes an introduction to the study of significant works of music of various historical periods

and styles. Includes drills in sight-singing and in melodic dictation. Emphasis on reading ability and comprehension of the musical score through effective analysis. Prerequisite: Mus. 131.

**Mus. 151: Literature and Materials of Music I (Liberal Arts) 3 s.h.**

The basic vocabulary of music fundamentals needed for the effective study of music: notation, scale structures, intervals, triads and seventh chords, rhythm and meter, phrase and cadence, overtone series, modulation, introductory study of two- and three-part forms, etc. The fundamental elements will be presented in the light of their actual occurrence in musical works of the past and present. The pace and scope of this course makes some previous musical training, background and experience highly desirable. Admission by permission of Head of Music Dept.

**Mus. 152: Literature and Materials of Music II (Liberal Arts) 3 s.h.**

An introduction to the study of significant works of music of various historical periods and styles. Examples chosen for study present a gradual progression from the more simple to the more complex in terms of musical texture, formal structure, and instrumentation. Includes drills in sightsinging and melodic and harmonic dictation, harmonic and contrapuntal part-writing, and creative assignments in the writing of melodies, cadences, harmonic phrases, and short compositions to demonstrate familiarity with the styles of composers of various periods. Prerequisite: Mus. 151.

Musical Organization Catalog Numbers	0 s.h.
Mus. 153: Concert Choir	0 s.h.
Mus. 154: Madrigal Singers	0 s.h.
Mus. 155: Orchestra	0 s.h.
Mus. 156: Concert Band	0 s.h.
Mus. 157: Marching Band	0 s.h.
Mus. 158: Chamber Music Ensemble	0 s.h.
Mus. 159: Symphonic Wind Ensemble	0 s.h.
Mus. 160: String Class	3 s.h.

A study of the four orchestral stringed instruments: violin, viola, violincello, and string bass with emphasis on fundamentals such as bowing techniques, accuracy of intonation, and performing experience in ensemble work. No prerequisite.

**Applied Music**

Individual instruction in voice, piano, strings, woodwinds, and brass. Stress is placed on the development of an attitude of artistic maturity on the part of the student, and upon artistic performance at all levels of proficiency. Admission by audition and permission of instructor only. Prerequisite: Mus. 131 or equivalent background. Course numbers are listed below.

Mus. 161: Piano	1 s.h.
Mus. 162: Voice	1 s.h.
Mus. 163: Violin, Viola	1 s.h.
Mus. 164: Cello, String Bass	1 s.h.
Mus. 165: Flute, Clarinet	1 s.h.
Mus. 166: Oboe, Bassoon	1 s.h.
Mus. 167: Trumpet, French Horn	1 s.h.
Mus. 168: Trombone, Tuba	1 s.h.
Mus. 169: Percussion	1 s.h.
Mus. 231: Teaching Music Creatively	3 s.h.

The five-fold program of elementary music (singing, listening, reading, moving, and playing of instruments) is approached through creative and experimental techniques which permit the child to learn with the body, mind, spirit, and through his whole personality. Each of the various phases of the elementary music program should emerge as a vital, creative activity.

- Mus. 232: Piano Keyboard** 3 s.h.  
 This course provides skills needed in playing the piano. Various styles of accompaniment for songs, rote playing, and sight reading are studied. Emphasis is placed upon the development of technical skills, reading facility and memorization.
- Mus. 233: Song Literature for Elementary Education** 3 s.h.  
 A further study of the materials used in music education in the elementary school, including songs for rote teaching, folk songs from various countries, and appropriate art songs. Emphasis is given to the development of the singing voice and to the achievement of vocal command of representative song literature.
- Mus. 251: Literature and Materials of Music III (Liberal Arts)** 3 s.h.  
 A continuation of the objectives and procedures of Music 151 but including the study of musical works of greater complexity of formal structure, harmonic and contrapuntal texture. In addition stylistic comparisons will be made of works of a certain type written by composers of various periods. Prerequisite: Mus. 151, 152.
- Mus. 252: Literature and Materials of Music IV (Liberal Arts)** 3 s.h.  
 A summary and synthesis of music literature considered chronologically from the standpoint of the historical evolution of musical style. In addition, at least one composer will be selected from each historical period for particular study concerning the range and scope of his total output in relation to the stylistic changes or growth which occur within his own personal language. Prerequisites: Mus. 151, 152, 251.
- Mus. 253: Harmony I** 3 s.h.  
 Aspects of chord connection and voice-leading in four-part writing. Primary and secondary triads and their inversions; seventh chords; non-harmonic tones; simple modulation. Harmonic analysis of representative musical examples to determine creative practices of composers of various periods. Prerequisite: Mus. 131 or equivalent musical background.
- Mus. 254: Harmony II** 3 s.h.  
 A continuation of Music 253. Chromatic harmony; altered chords; contrapuntal aspects of four-part writing. Further harmonic analysis of musical examples extending from Bach Chorales to a variety of contemporary works. Prerequisite: Mus. 253.
- Mus. 255: Ear Training and Sight Singing** 3 s.h.  
 Training and practice in melodic, rhythmic and harmonic dictation to develop ability to identify, understand, and write what is heard. Emphasis on singing at sight from a score and on aural analysis of melody and harmony. Prerequisite: Mus. 131.
- Mus. 256: Elements of Conducting** 3 s.h.  
 An insight into the various responsibilities of the conductor, including leadership qualities, musical understanding, and baton technique. Analysis of a variety of performance practices to develop positive and proper interpretative procedures.
- Mus. 257: History of Music I** 3 s.h.  
 A study of western music from its origins in ancient Egyptian, Chinese, Hebrew, and Greek cultures through the development of plainsong and polyphony to Haydn and Mozart. Analysis of styles and techniques employed by various composers and of concurrent trends in the other arts.
- Mus. 258: History of Music II** 3 s.h.  
 A continuation of Music 257. A detailed study of music through listening and score analysis from Beethoven to the present, emphasizing development and experimentation in technique throughout the twentieth century. Music 257 desirable but not required.

**Mus. 261: Band and Orchestral Instruments I**

3 s.h.

The construction, tone quality, range, and special uses of each instrument, in solo capacity or as part of the orchestra or band. Practical work includes learning to play and to demonstrate the various instruments, with emphasis on fundamental techniques.

**Mus. 262: Band and Orchestral Instruments II**

3 s.h.

A continuation of Mus. 261. Instrumental techniques and uses as related to ensemble and solo playing. Study of the mechanics of each instrument; fingering of difficult passages; securing and maintaining tonal balance in an instrumental organization; preparation for arranging; clinical examination of new materials. Prerequisite: Mus. 261.

**Mus. 351: Literature and Materials of Music V (Liberal Arts)**

3 s.h.

A survey of the literature of music within the area of the student's particular field of interest (i.e. vocal, keyboard, instrumental) designed to develop a knowledge of the music available to the student as a performer and an understanding of appropriate style in performance. Prerequisites: Mus. 151, 152, 251, 252.

**Mus. 352: Symphonic Literature**

3 s.h.

An intensive study of orchestral music from the Baroque period to the present, using scores, live performances and recordings, with particular reference to performance practices and stylistic analysis. Prerequisites: Mus. 251, 252.

**Mus. 353: Chamber Music Literature**

3 s.h.

An intensive study of music written for small ensembles from the Renaissance period to the present. Representative works from each period will be selected for careful investigation and analysis. Performance by members of the class or by faculty groups will be used wherever possible. Prerequisite: Mus. 251, 252.

**Mus. 354: Contemporary Music**

3 s.h.

A critical study of music in the twentieth century with emphasis on the works of Stravinsky, Hindemith, Schoenberg and Bartok; English, French, Russian, and German contemporaries; composers working in the United States today. Prerequisites: Mus. 251, 252.

**Mus. 355: Operatic Literature**

3 s.h.

A comprehensive survey of the entire field of operatic music from 1600 to the present, including 17th century Baroque opera; 18th century operatic reforms (Gluck and Mozart); opera in the 19th century (Verdi, Wagner, Strauss, and Puccini); 20th century trends in opera (Stravinsky, Berg, Britten, Menotti, etc.). Prerequisites: Mus. 251, 252.

**Mus. 356: Choral Literature**

3 s.h.

A comprehensive survey of choral music from the fifteenth century to the present, with emphasis on masses, motets, and madrigals of the Renaissance period; oratorios, cantatas and Passions of the Baroque period; major choral works of Haydn, Mozart, Beethoven, Berlioz, Mendelssohn, Verdi and Brahms; choral works of the twentieth century. Prerequisites: Mus. 251, 252.

**Mus. 357: Band Literature**

3 s.h.

A comprehensive survey of the available published and recorded literature for marching, military and concert bands, symphonic wind ensembles, and woodwind and brass chamber ensembles including transcriptions and arrangements; major publishers in the field; evaluation of various editions; and also a study of the principal trends of instrumental pedagogy, repertoire, and performance. Prerequisites: Mus. 131, 132.

**Mus. 358: Trends in American Music**

3 s.h.

A study of the development of music in America from pre-Revolutionary times to the present. Extensive outside reading. Prerequisite: Mus. 131, 132.

**Mus. 361: Piano Teaching Methods and Materials 3 s.h.**

A comprehensive survey of modern piano teaching methods and available published teaching materials. Emphasis will be placed on the teaching of notation and the development of reading skills; the teaching of keyboard techniques through an understanding of the player's physical mechanism and the coordination of timing and touch; problems of fingering, pedaling, and memorization. Evaluation of materials for beginning students; easier teaching pieces by the great composers; anthologies; appropriate music for the intermediate student, leading to a more advanced technique and musicianship and to acquaintance with a wide range of composers and musical styles. Prerequisites: Mus. 151, 152; or, Mus. 131 and permission of the instructor.

**Mus. 364: Composition 3 s.h.**

A study of the nature of the musical idea and of the various possibilities of its subsequent development, including canonic or fugal treatment, motivic development, and variational procedures. A review of traditional structural plans and of contemporary formal and stylistic trends. Creative assignments emphasize the understanding of past and present compositional styles and techniques and the gradual development of a personal language. Prerequisites: Mus. 151, 152.

**Mus. 365: Orchestration 3 s.h.**

Advanced study in band and orchestra scoring with special emphasis on the mechanics of arranging. Individual scores and parts will be conducted and played by the college band and orchestra. Prerequisites: Mus. 253, 261.

**Mus. 366: Band Arranging 3 s.h.**

A study of instrumentation and scoring problems in marching, military and concert bands, symphonic wind ensembles, and woodwind and brass chambers ensembles. Emphasis on score layout and notation, copying and multiple reproduction of parts, copyright implications, and knowledge of effective combination of instrumental sounds. Prerequisites: Mus. 131, 261 (or equivalent background) and permission of instructor.

**Mus. 367: Choral Conducting 3 s.h.**

An intensive survey of choral literature with organization for reading, conducting, and interpretation of choral music of all periods, styles, and vocal arrangements, together with emphasis upon the psychology of choral ensembles. Prerequisite: Mus. 256.

**Mus. 368: Choral Techniques 3 s.h.**

An intensive approach to the development of techniques and abilities necessary for working with or participating in choral ensembles. Vocal techniques, tone production, proper breath control, and a sound knowledge of choral literature are offered.

**Mus. 451: Advanced Orchestral Conducting 3 s.h.**

A study of selected major works from the orchestral literature with particular reference to performance problems involving tonal balance, tempi, complex rhythmic and polymetric situations. Conducting experience with the orchestra. Emphasis on a thorough understanding of the musical score and on effective rehearsal techniques. Prerequisites: Mus. 251, 252, 256, and 352.

**Mus. 452: Advanced Choral Conducting 3 s.h.**

A study of selected major works from the choral literature with particular reference to performance problems involving diction, intonation, tonal quality and balance, tempi, complex rhythmic and harmonic situations. Conducting experience with the Concert Choir and/or Madrigal Singers. Emphasis on a thorough understanding of the musical score and on effective rehearsal techniques. Prerequisites: Mus. 251, 252, 356, and 367.

## PHILOSOPHY

**Phil. 111: Elementary Logic**

3 s.h.

Principles of correct reasoning; principles of deductive and inductive inference and scientific method; use and misuse of language in reasoning.

**Phil. 112: Symbolic Logic**

3 s.h.

A study of the essential elements of symbolic logic including Boolean expansions, truth tables (symbolic proofs), the logic of relation, quantification rules, the properties of deductive systems, and propositional calculus. Special attention is given to the theoretical contributions of Carnap, Quine, and Russell. Prerequisite: Phil. 111.

**Phil. 211: Introduction to Philosophy**

3 s.h.

Inquiry into the persistent problems of philosophy, primarily those concerning man, nature and God. Prerequisite: sophomore standing.

**Phil. 212: Ethics**

3 s.h.

Examination of the problems of value and moral standards with a view toward developing an appreciation of the nature of the moral life. Prerequisite: sophomore standing.

**Phil. 255: History of Philosophy I**

3 s.h.

Thinkers from the Ancient Greeks up to the Renaissance, with special attention to Plato, Aristotle, Augustine, and Aquinas. Prerequisite: sophomore standing.

**Phil. 256: History of Philosophy II**

3 s.h.

Thinkers from the Renaissance to the 19th Century, with special attention to Descartes, Spinoza, Hume, Kant, and Hegel. Prerequisite: Philosophy 211 or 255.

**Phil. 350: Philosophy of Religion**

3 s.h.

Inquiry into the nature and validity of religious knowledge; the nature and existence of God; the nature of man and human destiny. Prerequisite: 3 credit hours in philosophy.

**Phil. 351: Social and Political Philosophy**

3 s.h.

Study of social and political philosophers with special attention to their significance for the present; the individual in relation to the state and society. Prerequisite: 3 credit hours in Philosophy.

**Phil. 352: Theory of Knowledge**

3 s.h.

Concepts and problems involved in the appraisal of certain types of human knowledge: perception, knowledge and belief, and truth. Prerequisite: 6 credit hours in Philosophy.

**Phil. 353: Metaphysics**

3 s.h.

Inquiry into some of the fundamental philosophical concepts: being, substance, matter, mind, and God. Prerequisite: 6 credit hours in Philosophy.

**Phil. 354: Philosophy of Art (Aesthetics)**

3 s.h.

Study of some of the aesthetic theories from Plato to the present; nature of the aesthetic experience; principles of criticism in literature and the arts. Prerequisite: 3 credit hours in Philosophy.

**Phil. 355: Philosophy of Science**

3 s.h.

Methods and procedures of reliable knowledge in the formal, natural, and social sciences. Prerequisite: 3 credit hours in philosophy.

**Phil. 356: Oriental Philosophy**

3 s.h.

Significant contributions to philosophical and religious thought in the Near East, India, China, and Japan. Prerequisite: 3 credit hours in philosophy.

**Phil. 450: Contemporary Philosophy**

3 s.h.

Movements since the latter half of the 19th century: Naturalism, Dialectical Materialism, Positivism, and Existentialism. Prerequisite: Phil. 256.

## PHYSICS

**Ph. 251: General Physics I** 4 s.h.

This is a general course in mechanics, heat and sound. Topics studied include the mechanics of solids, liquids, gases, thermometry, calorimetry, heat transference, and the production and nature of sound waves including musical sound. Designed for non-physics majors. Prerequisite: Math. 152 or Math. 161.

**Ph. 252: General Physics II** 4 s.h.

This is a continuation of Ph. 251, a general course in electricity, magnetism, light, and atomic physics. Topics discussed include general concepts of magnetism, electrostatics, electrical circuits, alternating currents, optical instruments, reflection, refraction, interference, spectra, and some basic concepts of atomic structure. Designed for non-physics majors. Prerequisites: Math. 152 or 161; Ph. 251.

**Ph. 254: History of Physics** 3 s.h.

This is a study of the important historical discoveries that helped to create modern physics as we know it today. Prerequisites: Ph. 258 and 259 or Ph. 251 and 252.

**Ph. 257: Laboratory Techniques in Physics** 3 s.h.

This course is designed for secondary education majors in physics. The course includes laboratory planning; selecting, care, and storage of equipment. The laboratory experiments related to the P.S.S.C. course for high school physics are stressed. Prerequisites: Ph. 258 and 259 or Ph. 251 and 252.

**Ph. 258: Introductory Physics I** 5 s.h.

This is an introductory physics course designed for physics majors. This course includes mechanics, heat, and sound. Mathematics 252, Differential Calculus, should be taken concurrently.

**Ph. 259: Introductory Physics II** 5 s.h.

This is a continuation of Ph. 258, an introductory physics course designed for physics majors. This course includes electricity, magnetism, light, and atomic physics. Mathematics 351, Integral Calculus, should be taken concurrently. Prerequisite: Ph. 258.

**Ph. 351: Mechanics** 4 s.h.

This is an intermediate course in mechanics of solids, liquids, and gases. Studies are made of rectilinear and circular motion, work and energy, impulse and momentum, and oscillations. Prerequisites: Ph. 258 and 259.

**Ph. 352: Electricity and Magnetism** 4 s.h.

This is an intermediate course in electricity and magnetism. Topics include electrostatics, electric field, capacitance, electric potential, current electricity, magnetism, and A.C. circuits. Prerequisites: Ph. 258 and 259.

**Ph. 353: Atomic Physics** 4 s.h.

Introduction to the fundamental concepts of atomic and nuclear physics, in terms of experimental and theoretical developments. Kinetic theory, Bohr atom, spectra, external and nuclear structure of the atom, radioactivity. Prerequisites: Ph. 258 and 259 or Ph. 251 and 252.

**Ph. 354: Optics** 4 s.h.

This is an intermediate course in geometrical and physical optics. Topics include studies of thin lenses, thick lenses, interference, diffraction, polarization, color theory, and the study of spectra. Prerequisites: Ph. 258 and 259.

**Ph. 356: Heat** 4 s.h.

This is an intermediate course in heat. The basic concepts and principles are developed more intensively in the study of properties of gases and in thermodynamics. Some of the specific topics studied are temperature measurements, thermal expansion, specific heat, ther-

mal conductivity of solids and liquids, thermal properties of gases, change of phase and heat engines. Prerequisites: Ph. 258 and 259.

**Ph. 453: Physical Measurements**

3 s.h.

In this course a study is made of several instruments used in accurate measurements which play a vital role in industry, engineering, and physical science. Principles of operation and practical uses are emphasized. Some of the important instruments used in the areas of mechanics, heat, light, sound, astronomy, electricity, and atomic physics are studied. Field trips will be made to study industrial uses of instruments of measurement. Prerequisites: Ph. 258, 259.

**Ph. 455: Electronics**

3 s.h.

This course includes the analysis of circuits containing passive devices: resistors, capacitors, and inductors, as well as studies of active devices: vacuum tubes and transistors. The uses of these devices in communications and industry are studied. Prerequisites: Ph. 258 and 259 or Ph. 251 and 252.

**Ph. 457: Demonstrations in Physics**

3 s.h.

This course is designed for the secondary education major in physics. The preparation and performance of classroom demonstrations for use in secondary schools is stressed. Prerequisites: Ph. 258 and 259 or Ph. 251 and 252.

**Ph. 458: Electrical Measurements**

3 s.h.

Discussion and practice in the measurement of resistance, current, potential, inductance, capacitance, and impedance. Two lectures and one three-period lab. Prerequisites: Ph. 258 and 259 or Ph. 352.

**Ph. 460: Major Concepts**

3 s.h.

This course includes some basic concepts in physics which illustrate the importance of vector algebra and differential equations in the study of physics. Prerequisites: Ph. 258 and 259.

## POLITICAL SCIENCE

**P.S. 210: Introduction to Political Science**

3 s.h.

The purpose of this course is to expose the student to some of the basic and most commonly used concepts in political science as an aid toward better understanding of and advanced study in the discipline. These concepts cover the field of government and administration, comparative government, and political theory and practice.

**P.S. 211: American Government**

3 s.h.

The study of the general principles of the American system of constitutional government; special emphasis is placed upon the organization and functions of the national government—legislative, executive, and judicial. The rights and duties of citizenship, the electorate, political parties, civil rights, and the growing regulatory functions of government are carefully treated.

**P.S. 351: State and Local Government**

3 s.h.

This course deals mainly with a detailed study of how our state and local governments function. Emphasis is placed on Pennsylvania government and the study is implemented by a field trip to Harrisburg for a more complete observation of state government at work. Field trips are made to local borough council and neighboring council meetings when available. A detailed study of the Constitution of Pennsylvania is made with emphasis on current amendments and changes. Independent study through outside projects is one of the requirements of this course.

**P.S. 352: International Relations**

3 s.h.

This course emphasizes the modern economics, social, political, religious, and cultural problems that reflect their influence in the relationships of the great nations of the world. Special attention is

paid to the struggle of the peoples of the world to resolve their differences through international cooperation.

**P.S. 353: International Organization: Theory and Practice 3 s.h.**

This course is designed to afford the student an understanding of the forms and functions of the United Nations as it evolved from the League of Nations. Special reference is given to the work of the United Nations in relation to health and cultural welfare along with the more fundamental problems such as peace or war.

**P.S. 354: Constitutional Law of the United States 3 s.h.**

A study of the development of the Constitution through the interpretations of the Supreme Court. This includes a study of the separation of governmental powers, political and judicial processes, federalism as a legal device, and the relationship of liberty and authority to the individual living under government. Prerequisite: P.S. 211.

**P.S. 355: Political Parties and Elections 3 s.h.**

A survey course with emphasis on the study of the electorate, pressure groups, and public opinion, nature and history of political parties, party organization, methods of nominations, and elections. Special attention is given to the place of political parties and elections as instruments of democracy and their place in the framework of Pennsylvania's government.

**P.S. 451: Comparative Government 3 s.h.**

In this course major attention is given to Great Britain and Soviet Russia as best representing, among foreign governments, the democratic and authoritarian system. Brief consideration is given to the governments of France, Italy, Germany, and Japan. Frequent comparisons and contrasts are drawn between these governments and government in the United States. Prerequisite: P.S. 211.

**P.S. 458: English Constitutional History 3 s.h.**

A consideration of constitutional government in England from the beginning of English history to the present. The study of governmental powers, political and judicial processes, and the relationships of liberty and authority to the individual living under the government is included.

## PSYCHOLOGY

**Psy. 211: General Psychology 3 s.h.**

Study is made of the general subject matter of psychology, its methods and procedures, and its major findings. Areas of particular stress include genetic inheritance, development, learning, emotions and motivation, sensation and perception, and social aspects of behavior.

NOTE: Psychology 211 is a prerequisite for all of the following courses.

**Psy. 222: Educational Psychology 3 s.h.**

The application of psychological principles to education is studied. In particular, the teaching-learning process is emphasized including its correlation with problems of individual differences, maturation, psychological adjustment, and evaluation and measurement.

**Psy. 251: Experimental Psychology 3 s.h.**

This course aims to acquaint the student with psychological experimentation, particularly in the area of psychophysics. Subjects of experimentation include sensation, perception, illusions, learning, etc. Methods of psychological investigation other than experimental are also surveyed.

**Psy. 311: Mental Hygiene**

3 s.h.

This course emphasizes the psychodynamics of mental health, particularly as related to the "normal" individual. Problems of personality and mechanisms of adjustment, including the origin and resolution of conflicts and the role of emotion in behavior, are studied.

**Psy. 320: Human Growth and Development**

5 s.h.

Acquisition of understanding and appreciation of the mental, physical, social, and emotional aspects of development. Emphasis on techniques of motivation, principles of learning, the role of individual differences, the improvement of study habits, and environmental factors affecting attitudes, personalities, growth, and intellectual interests. Directed observation of children at various grade levels, lectures, discussions, readings, and reports.

**Psy. 331: Psychology of Adolescence**

2 s.h.

The physical, social, psychological, and cultural bases of adolescent behavior are studied as these relate to peers, home, school, and community.

**Psy. 331: Child Psychology**

3 s.h.

Developmental psychology of the child from birth through pre-adolescence is studied. Topics include the interaction of heredity and environment, personality, development, parent-child relationships, teacher- and school-child relationships, attitudes toward self and others, as well as physical, social, emotional, and intellectual development.

**Psy. 332: Psychology of Exceptional Children and Youth**

3 s.h.

This course introduces the student to the nature and characteristics of the blind, the deaf, the crippled, speech defectives, the mentally handicapped, the gifted, and the socially maladjusted. It aims to promote a functional understanding of the psychological implications of their behavior and its treatment as well as the guiding principles necessary to aid them in their learning processes.

**Psy. 333: Child Adjustment**

3 s.h.

This course is concerned with the study of the child's adjustment to his growing self and its environment. His emotional needs, the relationship of personal and environmental factors, his mode of adjustment, and the roles of parents, teachers, and special agencies in facilitating his adjustment are considered. Use is made of case histories, directed observations, and project work in developing techniques useful to the teacher in improving the latter's skill in working with children.

**Psy. 334: Abnormal Psychology**

3 s.h.

A survey is made in this course of the principal forms of the behavior disorders with emphasis on their etiology, diagnosis, prognosis, and treatment.

**Psy. 335: Social Psychology**

3 s.h.

Study is made in this course of the interpersonal relations of man and how these are affected by society's norms and values.

**Psy. 336: Systematic Psychology**

3 s.h.

In this course the major theoretical systems of modern psychology are examined and critically evaluated.

**Psy. 451: Quantitative Methods in Psychology and Education**

3 s.h.

Statistical theory is introduced in order to acquaint the student with the why, when, and how of various statistical treatments of psychological and educational data.

**Psy. 452: Physiological Psychology**

3 s.h.

Examination is made in this course of the basic physiological mechanisms underlying behavior with special emphasis upon the functions of the nervous and endocrine systems as these relate to sensation, perception, emotion, and learning.

**Psy. 453: Industrial Psychology**

3 s.h.

Study is made in this course of personality factors and individual differences in relation to success in business and industry. The psychological principles involved in advertising, selling, personnel problems, mental and physical efficiency, intelligence, motivation, fatigue, and the environmental setting are among those analyzed.

**Psy. 454: Personality**

3 s.h.

Systematic study is made of the development, dynamics, and structure of the self-system together with a critical comparison of the major theories of personality.

**Psy. 455: Psychology of Learning**

3 s.h.

A critical survey is made of the outstanding attempts to understand and explain the nature of the learning process. Emphasis will be placed on a comparison of current theories and their implications when applied to forms of learning from the simple to the complex.

**Psy. 456: Introduction to Psychological Testing**

3 s.h.

Consideration is given in this course to the better known psychometric instruments, the theories underlying their construction and use, their administration, and how results are scored, interpreted, and analyzed.

**Psy. 458: Sensation and Perception**

3 s.h.

The perceptual-sensory processes will be studied with a view to understanding their structural properties and their role in the psychological functioning of man. Each student will be involved in a research project and will be expected to prepare a detailed report of his findings.

**Psy. 464: Introduction to Clinical Psychology**

3 s.h.

Basic methods and techniques in clinical psychology will be critically examined and evaluated.

Prerequisites: Psy. 251, 354, and 456.

**Psy. 465: Research Seminar**

3 s.h.

This course affords students the opportunity to continue the study of research techniques. Each student, with the approval of the instructor, will undertake a research project in the area of his choice. The work will culminate in a paper of distinguished quality. Enrollment is limited to Psychology majors who have distinguished themselves in previous departmental courses.

Prerequisites: Psy. 251, 351, and 455 or 458 and permission of the instructor.

## RUSSIAN

**Russ. 151: Russian I (Elementary I)**

4 s.h.

Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until Russian 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

**Russ. 152: Russian II (Elementary II)**

4 s.h.

Continuation of Russian 151, with increasing emphasis on graded reading material. Prerequisite: Russian 151, or permission of the instructor.

**Russ. 251: Russian III (Intermediate I)**

3 s.h.

Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: Russian 152; or two years of high school study and/or a satisfactory placement test score.

<b>Russ. 252: Russian IV (Intermediate II)</b>	3 s.h.
Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: Russian 251; or three years of high school study and/or a satisfactory placement test score.	
<b>Russ. 253: Scientific Russian</b>	2 s.h.
A study of scientific terminology and style, with extensive readings in various scientific fields. Prerequisite: Russian 251 or equivalent. Science and mathematics majors may substitute this course for Russian 252.	
<b>Russ. 255: Russian Civilization I</b>	3 s.h.
A survey of the geography, history, literature, and culture of the Soviet Union, designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful, and integral part of a great civilization. Prerequisites: Russian 252; or four years of high school study and/or a satisfactory placement test score.	
<b>Russ. 256: Russian Civilization II</b>	3 s.h.
Continuation of Russian 255.	
<b>Russ. 351: Advanced Grammar and Composition</b>	3 s.h.
Intensive oral and written drill, with emphasis on finer points of grammar, and colloquial and idiomatic usage. English-to-Russian translation, free composition, and conversation on everyday topics.	
<b>Russ. 353: The Russian Drama</b>	3 s.h.
Dramatic works of the 19th and 20th centuries, with special emphasis on the works of Anton Chekhov.	
<b>Russ. 354: The Russian Novel</b>	3 s.h.
The great Russian novelists of the 19th Century: Gogol, Turgenev, Dostoevsky, and Tolstoy.	
<b>Russ. 355: Readings in Soviet Russian Literature</b>	3 s.h.
A survey of Russian literature since the Revolution of 1917.	
<b>Russ. 361: Dostoevsky</b>	3 s.h.
A study of the life and works of Dostoevsky, with emphasis on his great novels: <b>Crime and Punishment</b> , <b>The Idiot</b> , <b>The Possessed</b> , and <b>The Brothers Karamazov</b> .	
<b>Russ. 451: Supervised Readings in Russian Literature</b>	3 s.h.
The course is devoted to selected readings determined in relation to the needs and interests of the individual major.	

## SAFETY EDUCATION

<b>SE 211: General Safety Education</b>	3 s.h.
The development of habits and attitudes that will make for safe living by both teachers and students. Acquaintance with 1. Rules, regulations, and laws concerning the operation of motor vehicles; 2. Rules and regulations of pedestrian travel; 3. Other hazards to which we are commonly subjected, such as fire, electricity, etc., especially in the home and school.	
<b>SE 212: Organization and Administration of Safety Education</b>	3 s.h.
A consideration of procedures and problems related to the organization and administration of a safety education in the public school.	
<b>SE 213: Methods and Materials for Teaching Safety in the Secondary Schools</b>	3 s.h.
The study of evaluative techniques, content, methods, and teaching aids in the program of safety education in the secondary schools.	

<b>SE 214: Psychology of Accident Prevention</b>	<b>3 s.h.</b>
Relates the achievement of behavior consistent with safe living to the psychological factors and techniques essential in the learning process. A review of the literature and experimentation relative to proneness to accidents, effect of alcohol on drivers, reaction times, etc.	
<b>SE 215: Visual and Other Aids in Safety Education</b>	<b>3 s.h.</b>
Evaluation and use of posters, charts, radio, projectors, and special aids in the teaching of safety education.	
<b>SE 351: Driver Education and Traffic Safety</b>	<b>3 s.h.</b>
Classroom instruction combined with road training and the teaching of driving to beginners using dual control cars. Emphasis is placed upon the essential facts, principles, skill, and attitudes necessary for good driving and the teaching of same to beginning drivers. Ability to use and interpret the results of psycho-physical testing is required.	

## SCIENCE

<b>Ph. Sci. 111: Basic Physical Science I</b>	<b>3 s.h.</b>
The purpose of this course is to introduce the student to the scientific view of the physical world by selecting specific units from the fields of physics and chemistry. Topics covered in this course include systems of measurement, fundamentals of electricity and magnetism, and selected topics in chemistry emphasizing modern atomic theory, descriptive chemistry of the elements, and basic reactions illustrating principle laws of chemistry.	
<b>Ph. Sci. 112: Basic Physical Science II</b>	<b>3 s.h.</b>
This course is a continuation of Physical Science 111. A major unit on astronomy and space science is presented, including principles of light relating to the understanding of astronomical instruments. Additional topics covered in the course are heat and simple mechanics.	
<b>Sci. 222: Teaching of Elementary Science</b>	<b>2 s.h.</b>
Methods of presenting science in the elementary school. Attention is given to the scope and sequence of concepts and activities. Emphasis is placed on the physical sciences in developing and teaching lessons. Also stressed are evaluations of elementary science reading materials; texts and supplementary books; collections of resource materials; development of attitudes; and techniques of problem solving.	

<b>Sci. 231: Fused Science</b>	<b>2 s.h.</b>
This course, following the year of basic sciences, is designed to provide the prospective teacher with a more adequate background in the science of living things. To achieve this purpose units are selected which examine the natural history of our most familiar forms of life. The units covered are Woody Plants, Insects, Fishes, Amphibians, Reptiles, and Mammals. Emphasis is placed upon developing resourcefulness in gathering data and using the scientific method in the solution of problems.	

## SOCIOLOGY

<b>Soc. 211: Principles of Sociology</b>	<b>3 s.h.</b>
This is a basic course in sociology dealing with the interaction arising from the association of human beings. Emphasis is placed upon natural and social heritage; the meaning and functions of culture; and the origin, function, and characteristics of social institutions such as the family, religion, and the state, with inquiry into the nature and genesis of pathology.	

**Soc. 351: Contemporary Social Problems** 3 s.h.

This course deals with problems which seem to interfere with the proper functioning of our society as a whole. Such problems as divorce, alcoholism, the industrial worker, the mentally deficient, the small town, crime and the community, and many others are attacked and discussed. Individual research by means of projects is assigned and requires extensive reading in the field. Visits are made whenever possible to places where social problems are prevalent. The student should have had Soc. 211 as a background for this course.

**Soc. 352: Home and Family Living—The Family** 3 s.h.

This course deals with the development of the family and the home in its historical, economic, and legal aspects. The various factors influencing the organization, disorganization, and reorganization of the family are considered, as well as the modern trends in this basic institution.

**Soc. 361: Sociology of Deviant Behavior** 3 s.h.

This course deals with behavior which is considered to be in violation of the moral norms and enacted laws of a society. Some attention is devoted to the ways in which different societies define and treat such deviations and distinguish between undesirable or delinquent behavior and criminal behavior. Major emphasis is given to crime and juvenile delinquency; to the theories of the causes, treatment, and control of crime; and to correctional methods and administration of justice. Prerequisite: Soc. 211.

**Soc. 362: Racial and Ethnic Minority Problems** 3 s.h.

Background of racial and ethnic minority group relations in different ages and societies. Theories and scientific inquiries by sociologists, anthropologists, and psychologists related to racial and ethnic groups. Contemporary aspects of inter-ethnic and inter-racial group problems. Proposals for alleviating and resolving problems, and their implications for major social institutions such as education, the economy, and government. Prerequisite: Psy. 211.

## SPANISH

**Span. 151: Spanish I (Elementary I)** 4 s.h.

Essentials of grammar, inductively presented. Emphasis on aural comprehension and oral expression, with extensive use of the language laboratory. Students may not receive credit for this course until Spanish 152 has been successfully completed. Exceptions may be made for seniors and transfers upon the recommendation of the Department Head.

**Span. 152: Spanish II (Elementary II)** 4 s.h.

Continuation of Spanish 151, with increasing emphasis on graded reading material. Prerequisites: Spanish 151, or permission of the instructor.

**Span. 153: Elementary Spanish Conversation** 3 s.h.

Conversational practice, with extensive oral drill of grammatical patterns. Designed for those students who have met the prerequisites for Spanish 251 but are lacking in aural-oral proficiency. May be taken concurrently with Spanish 251.

**Span. 251: Spanish III (Intermediate I)** 3 s.h.

Brief systematic review of basic grammar; graded readings, conversation and composition on everyday topics. Prerequisites: Spanish 152; or two years of high school study and/or a satisfactory placement test score.

<b>Span. 252: Spanish IV (Intermediate II)</b>	<b>3 s.h.</b>
Intensive reading of selected short stories and/or other works; outside reading, with oral and/or written reports. Prerequisites: Spanish 251; or three years of high school study and/or a satisfactory placement test score.	
<b>Span. 253: Commercial Spanish</b>	<b>3 s.h.</b>
A study of commercial terminology and style, with extensive practice in the writing of business letters of various kinds. Prerequisite: Spanish 251 or equivalent. Economics majors may substitute this course for Spanish 252.	
<b>Span. 255: Hispanic Civilization I</b>	<b>3 s.h.</b>
A survey of Hispanic geography, history, literature, and culture designed to equip teachers with the materials and understanding necessary to the presentation of the language as a rich, meaningful and integral part of a great civilization. Prerequisites: Spanish 252; or four years of high school study and/or a satisfactory placement test score.	
<b>Span. 256: Hispanic Civilization II</b>	<b>3 s.h.</b>
Continuation of Spanish 255, which is prerequisite. These two courses are required of all majors.	
<b>Span. 351: Advanced Spanish Grammar and Composition</b>	<b>3 s.h.</b>
Intensive oral and written drill, with emphasis on finer points of grammar, colloquial, and idiomatic usage. English-to-Spanish translation, free composition, and conversation on everyday topics. Prerequisites: Same as for Spanish 255.	
<b>Span. 352: Introduction to Spanish Literature</b>	<b>3 s.h.</b>
Study and discussion of the main trends of Spanish thought and literary expression. Emphasis is placed on the development of the novel and drama during the Golden Age.	
<b>Span. 353: The Modern Spanish Drama</b>	<b>3 s.h.</b>
A study of the modern theater in Spain, with emphasis on Benavente, García Lorca, Casona, Buero Vallejo, and López Rubio.	
<b>Span. 354: The Modern Spanish Novel</b>	<b>3 s.h.</b>
The development of the novel in Spain during the 19th and 20th centuries, with emphasis upon the discussion of realism, regionalism, and naturalism.	
<b>Span. 355: The "Generation of 1898"</b>	<b>3 s.h.</b>
Discussion of the principal authors of this group and their influence on 20th century Spanish thought, with an analysis of the role played by historical events in the development of the movement.	
<b>Span. 359: The Literature of the Golden Age</b>	<b>3 s.h.</b>
A survey of the greatest period of Spanish literature, with selected readings from Cervantes' <i>Don Quixote</i> and the plays of Lope de Vega, Tirso de Molina, Calderón, and Ruiz de Alarcón.	
<b>Span. 361: The History of Mexican Literature</b>	<b>3 s.h.</b>
The history of Spanish literature in Mexico from the Conquest to the present, with special emphasis on Lizardi, Altamirano, the novelists of the Revolution, and selected contemporary writers.	
<b>Span. 451: Supervised Readings in Hispanic Literature</b>	<b>3 s.h.</b>
The course is devoted to selected readings determined in relation to the needs and interests of the individual major.	

## SPECIAL EDUCATION

<b>Spec.Ed. 111: Education of Exceptional Children</b>	<b>3 s.h.</b>
The course is a study of the causes, characteristics, and implications—educational, social, and vocational—of children who are exceptional because of intelligence, physical development, behavior,	

vision, hearing, and speech. It also acquaints prospective professional personnel with vocational opportunities in Special Education and Rehabilitation.

**Spec.Ed. 221: Neurological Impairment**

3 s.h.

The etiology and characteristics of cerebral palsy, aphasia, cerebral dysrhythmia, Strauss Syndrome and various other anomalies of the central nervous system are studied and observed in the clinic and classroom with concern for the current diagnostic, educational and rehabilitation implications.

**Spec.Ed. 220: Nature of Mental Retardation**

3 s.h.

This is a comprehensive study of the biological, psychosocial, and educational implications of retarded mental development, including a consideration of etiology; assessment, and diagnosis; educational programs, including pre-school and post-school; adult social and vocational adjustment; national and local programs; and research. Prerequisite: Spec.Ed. 111.

**Spec.Ed. 321: Curriculum Development for Exceptional Children**

(Mentally Retarded)

3 s.h.

This is a study of the educational objectives for children with retarded mental development and the nature of curricula designed to satisfy these objectives; application of the fundamentals of curriculum construction; analysis and evaluation of representative curricula at elementary and secondary levels by study and observation; survey of materials and equipment to implement the curriculum. Prerequisite: Spec.Ed. 220.

**Spec.Ed. 322: Educational Appraisal in Mental Retardation**

3 s.h.

This course involves study, observation, and directed practice with the applied diagnostic and appraisal techniques appropriate to the education of mentally retarded children. It includes theory of testing; the examination of elementary statistical concepts as they facilitate selection, administration, scoring and interpretation of standardized tests; and the construction of teacher-made instruments as specifically applied to the mentally retarded child. Prerequisite: Spec.Ed. 220.

**Spec.Ed. 422: Methods of Teaching Exceptional Children**

(Mentally Retarded)

3 s.h.

This course provides for the analysis of the teaching-learning process—the teacher, the learners, and their interaction. Particular teaching strategies for meeting the unique needs of educable mentally retarded pupils as individual learners are considered and implemented. Prerequisite: Spec.Ed. 220.

**Spec.Ed. 423: Curriculum Materials for Exceptional Children**

(Mentally Retarded)

3 s.h.

This course considers contemporary curricular innovations in educational programs for educable mentally retarded children and youth, with particular attention to the sociocultural implications of changing curricular practices and the new instructional media and technology. Prerequisite: Spec.Ed. 321.

**Spec.Ed. 424: Laboratory Methods with Exceptional Children**

(Mentally Retarded)

This course is designed to expand the understanding of the teaching-learning process by observation and application, focusing upon the development of advanced skills in the analysis of teacher behaviors, learner behaviors, classroom interaction and their implications. Prerequisite: Spec.Ed. 422.

**Spec.Ed. 429: Student Teaching (Mentally Retarded)**

6 s.h.

Observation and participation in teaching children with retarded mental development and in activities related to the performance of a teacher's work.

## SPEECH

**Sp. 010: Remedial Speech** 0 s.h.  
 Speech Clinic—diagnostic and remedial program for the speech handicapped.

This service is made available to the students regularly enrolled at the college. College students who need help are encouraged to seek the help of the clinic. Every effort is made to help students remove deficiencies which would interfere with their successful progress in college. Students referred to the Director of the Speech Clinic must officially enroll through the office of the registrar for this non-credit course.

**Sp. 113: Fundamentals of Speech** 3 s.h.

Study and application of the fundamental principles of effective speaking; training in selection, organization, and development of materials suitable for speeches; analysis of voice; personality adjustment as related to speaking-listening situations; patterns for analysis of an audience; prior analysis, cyberneic analysis, and post analysis; techniques of group dynamics and role playing.

**Sp. 114: Advanced Public Speaking** 2 s.h.

Inquiry into and practice in the principles of effective public speaking. Detailed analysis of the areas of invention, arrangement, style, and delivery, and an introduction to speech criticism as a tool to improve the speaker's own abilities. Prerequisite: Speech 113.

**Sp. 115: Parliamentary Procedure** 1 s.h.

A study of the principles and applications of the standard parliamentary rules used in conducting formal meetings of social, civic, and political bodies.

**Sp. 251: Voice and Diction** 3 s.h.

The objective of this course is to help students improve their speech by the elimination of faulty voice and articulation habits. Attention is given to such basic skills as volume, pitch, resonance, rate, phrasing, pronunciation and articulation. Tape recordings are used as a helpful device for analyzing problems and noting progress. Prerequisite: Speech 113.

**Sp. 252: Introduction to Speech Correction** 3 s.h.

Designed to train prospective teachers to care for defective speech in the classroom and to make educators and society cognizant of the increasing need for a definite speech education program in our public schools. A study of speech sound, speech mechanisms, symptoms, causes, and treatment of minor speech, voice, and hearing disorders. Prerequisite: Speech 113.

**Sp. 253: Introduction to the Theatre** 3 s.h.

Survey of plays, theatre practice, and production from Aeschylus to Miller. Theory and criticism.

**Sp. 254: Principles of Acting I** 3 s.h.

Principles and techniques of movement, stage direction, pantomime dramatization, characterization development, and interpretation through improvisations and playing roles in scenes from contemporary dramas.

**Sp. 255: Stagecraft and Lighting** 3 s.h.

Study and practice in scene construction, scene painting, theatre equipment, the basic technical elements of stage electricity, and instrumentation operation and selection.

**Sp. 256: Argumentation and Debate** 3 s.h.

Principles of reasoned discourse and their application to controversial issues.

- Sp. 257: Advanced Debate** 2 s.h.  
Further experience in competitive debating and in a variety of debating forms is provided. Prerequisite: Consent of instructor.
- Sp. 264: Discussion** 2 s.h.  
Designed to develop the attitudes, skills, and knowledge of methods favorable to effective participation and leadership in discussion by conferences, committees, and other small groups.
- Sp. 311: Persuasion** 3 s.h.  
Study and practice in persuasive speaking. General theories of persuasion, the role of persuasion in a democratic society, and an introduction to modern experimental research in the area included.
- Sp. 350: Summer Drama Workshop** 6 s.h.  
The summer drama workshop combines study and practice in the dramatic arts and includes in its formal intensive study in acting, play production, direction, makeup, scene design, stage lighting, and stagecraft. In conjunction with the workshop, Clarion State College sponsors a Summer Theatre Company consisting of members of the workshop and produces three major productions.
- Sp. 351: Advanced Theater Production** 6 s.h.  
Advanced study and practice in the dramatic arts, including projects in scene design, theater management, and acting. Students will work with members of the Summer Drama Workshop in the production of three major plays for the Clarion Summer Theater. Prerequisite: Sp. 350.
- Sp. 352: Play Directing** 3 s.h.  
A study of the fundamentals and procedures of play directing and problems faced in educational theater, including analysis of the script, methods of casting, and rehearsal. Students direct one-act plays for public presentation.
- Sp. 354: Oral Interpretation** 3 s.h.  
The course emphasizes the understanding and appreciation of literature through developing skill in reading aloud. Help is given in selecting, adapting, and preparing literature for presentation. Special attention is given to reading materials required of the classroom teacher. Prerequisite: Speech 113.
- Sp. 358: Psychology of Speech** 3 s.h.  
This course aims to investigate the several theories of speech origin; study the neurological and psychological bases of speech; trace the ontogeny of speech and language; study speech as an aspect of personality structure; and investigate certain speaker-audience phenomena. The psychology of stuttering is given special consideration. Prerequisite: Sp. 252.
- Sp. 359: History of the Theater** 3 s.h.  
History of plays and playwrights, theater architecture, scene design, costume and methods of acting and directing from the fifth century B.C. to the present.
- Sp. 361: Principles of Acting II** 3 s.h.  
A study of period styles of acting, speech, and movement which includes the Classic Shakespearean, Commedia, Restoration, Romantic, and Early American Periods.
- Sp. 362: Principles of Stage Design** 3 s.h.  
Study and practice in the aesthetics, methods, and techniques of setting and lighting design for the theater and adaptation to television. Covers both period and contemporary analysis.
- Sp. 363: Theatrical Costume and Make-up** 3 s.h.  
A historical survey of civil costume, techniques of costume construction, and fundamentals of stage make-up.

- Sp. 365: Advanced Oral Interpretation 2 s.h.**  
Inquiry into the advanced techniques of the oral interpretation of prose, poetry and drama. Emphasis on programming and direction of oral interpretative programs. Prerequisite: Speech 354.
- Sp. 400: Oral Interpretation of the Bible 2 s.h.**  
Oral Interpretation of the Bible in terms of literature of address, didactic literature, short story, and poetry. Special attention to unique problems of oral interpretation of this form of literature. Prerequisite: Speech 354 or consent of the instructor.
- Sp. 401: Oral Interpretation of Elizabethan Literature 2 s.h.**  
A study of the Oral Interpretation of the literary works of Marlowe, Dekker, Ben Jonson, Beaumont and Fletcher, Shakespeare, etc. Prerequisite: Speech 354 or consent of the instructor.
- Sp. 402: Oral Interpretation of Greek and Roman Literature 2 s.h.**  
Oral Interpretation of problems peculiar to Greek Poetry and Drama—Homer, Aeschylus, Sophocles, Euripedes, Aristophanes, Plato's dialogues; and Roman literature—Lucretius, Vergil, Horace, Cicero, Catullus, and Ennius.
- Sp. 411: Classical Rhetoric 3 s.h.**  
Study of the rhetorical theories of the ancient Greeks and Romans and their historical context. Includes the work of Plato, Aristotle, Cicero, Quintilian, and St. Augustine. For seniors.
- Sp. 412: British Public Address 3 s.h.**  
Study of the rise of public speaking in Great Britain, and its influence on the course of history in that democracy, both in and out of Parliament. Includes the study of the speaking of Lord Chatham, Burke, Fox, Pitt, Sheridan, Gladstone, Disraeli, and Churchill. For seniors.
- Sp. 451: Advanced Speech 3 s.h.**  
A seminar in methods of investigation and research in the field of speech. Published articles and books of a scholarly nature are analyzed and critically evaluated. Each student selects a topic for intensive study. The course culminates in a written research project. Prerequisite: Open only to juniors and seniors with approval of department chairman.
- Sp. 453: Applied Phonetics 3 s.h.**  
An analysis of the speech sound used in English so that the student develops auditory acuity and correct reproduction of sounds; transcripts of spoken material using I.P.A. system; comparison of phonetic alphabet and diacritical marking system; study of structure and function of speech organs; voice improvement; applied phonetics for speech correction.
- Sp. 454: Radio and Television 3 s.h.**  
Lecture and workshop in the use of radio and television as media of instruction in the classroom. Participation in the planning, writing, and producing of radio broadcasts and telecasts of an educational nature. Field work in production whenever possible. Meets 5 hours per week.
- Sp. 455: Creative Dramatics 3 s.h.**  
A study of the techniques and theory of playmaking. Study of dramatic activities for children including story telling, story dramatization, rhythms, and pantomime. Designed for the elementary teacher.

## SPEECH PATHOLOGY AND AUDIOLOGY

**SPA 231: Hearing Problems**

3 s.h.

The nature of hearing disorders and the medical, social, psychological, and educational implications are investigated, with attention focused upon the roles of parents, specialists, and educators toward the rehabilitative process. Analysis and practice in the techniques of speech and audiometric evaluation are provided.

**SPA 232: Clinical Phonetics**

3 s.h.

Introduction to the science of English sounds. Consideration of phonetical applications to matters of speech correction and improvement.

**SPA 233: Anatomy of Speech and Hearing Mechanisms**

3 s.h.

Study of the anatomy and physiology of the speech and hearing mechanisms.

**SPA 253: Speech Problems**

3 s.h.

This course is the first half of a sequence in Speech Pathology. Emphasis will be placed on the description, diagnosis, and treatment of articulation disorders, language development problems, tongue thrust, and cleft palate. Basic linguistic, psychological and statistical concepts necessary in the study of clinical speech are also included.

**SPA 331: Speech and Hearing Clinic I: Practicum**

3 s.h.

Supervised clinical observation and practice in case study and conferences, diagnostic evaluations, remedial procedures, parent conferences, and reporting. The application of theory in the development of clinical skills with individuals and small groups of children and adults, for a minimum of 135 clock hours. Prerequisite: SPA 231.

**SPA 332: Speech and Hearing Clinic II: Advanced Practicum**

3 s.h.

Supervised clinical observation and practice in case study and con-differential diagnosis, therapy with complex speech and hearing disorders, parent conferences, and reporting. Both individual and group techniques are emphasized with children and adults, for a minimum of 135 clock hours. Prerequisite: SPA 331.

**SPA 333: Curriculum Materials for Speech Correction**

3 s.h.

Teaching techniques, source materials, visual aids, and special problems to be employed in speech practice and correction.

**SPA 334: Speech Correction for the Classroom Teacher**

3 s.h.

Designed to acquaint students with speech problems common to children on the elementary level. Emphasis is placed on the study of materials, methods, and techniques used by the classroom teacher in improving the speech of all children.

**SPA 356: Speech Pathology**

3 s.h.

This course is the second half of a sequence in Speech Pathology. The major emphasis will be placed on the description, diagnosis, and treatment of cerebral palsy, voice disorders, aphasia, and stuttering. A basic approach to the psychodynamics of the speech therapy process are also included.

**SPA 421: Speech Reading and Auditory Training**

3 s.h.

A comprehensive study of specialized techniques, with emphasis upon auditory training, speech reading, and speech retraining. This includes evaluation and utilization of special equipment and materials —visual, acoustical, and kinaesthetic. Prerequisite: SPA 231.

**SPA 422: Student Teaching with the Speech and**
**Hearing Handicapped**

6 or 12 s.h.

Observation of and participation in teaching and activities related to the performance of the itinerant speech and hearing teacher's work.

**SPA 432: Audiology**

3 s.h.

A continuation of SPA 231: Hearing Problems.

## ENROLLMENT AT CLARION STATE COLLEGE

Student enrollment has risen from 764 in September, 1958, to 2800 in September, 1966, making Clarion one of the fastest growing colleges in Pennsylvania. The present enrollment of 2800 is almost equally divided between men and women and is drawn from forty-four counties of the Commonwealth. Each year the number of students from states other than Pennsylvania increases and there is a small but encouraging representation from foreign countries.

An analysis of the enrollment in September, 1965, showed the following counties contributing substantial numbers of students to Clarion.

Allegheny	788	Erie	36
Armstrong	111	Fayette	11
Beaver	151	Forest	17
Blair	24	Indiana	32
Bucks	10	Jefferson	102
Butler	89	Lawrence	58
Cambria	83	McKean	69
Cameron	10	Mercer	56
Centre	19	Somerset	50
Clarion	314	Venango	337
Clearfield	80	Warren	21
Crawford	31	Washington	63
Elk	46	Westmoreland	271

A total of ninety six students came from twenty other Pennsylvania counties, from other states, and from foreign countries.

## THE BOARD OF TRUSTEES

Clarion State College, Clarion, Pennsylvania

J. Ralph Rackley, Ex Officio

Superintendent of Public Instruction

E. Clinton Stitt, President	.....	Kittanning, Pa.
Edward J. Crowe	.....	St. Marys, Pa.
Charles W. Dinger	.....	Reynoldsville, Pa.
Howard E. Gayley	.....	Brookville, Pa.
Harriet S. Hearst	.....	Clarion, Pa.
Keva H. L. Miller	.....	Oil City, Pa.
H. Ray Pope, Jr.	.....	Clarion, Pa.
Philip W. Silvis	.....	Tionesta, Pa.
Lloyd F. Weaver	.....	Clarion, Pa.

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF PUBLIC INSTRUCTION**

J. Ralph Rackley  
Superintendent of Public Instruction  
State Board of Education

Joseph F. Burke .....	Philadelphia
Mario C. Celli .....	McKeesport
Paul S. Christman .....	Schuylkill Haven
Mrs. Albert M. Greenfield .....	Philadelphia
Ira C. Gross .....	Beaver Springs
Frank N. Hawkins .....	Pittsburgh
Parke H. Lutz .....	Denver
Katharine E. McBride .....	Bryn Mawr
Emaline K. Mohr .....	Allentown
William M. Potter .....	Wilkinsburg
Gail L. Rose .....	Renfrew
James H. Rowland .....	Harrisburg
Charles G. Simpson .....	Philadelphia
Duane E. Wilder .....	Warren
Walter F. Wilmarth .....	Kingsley
Leonard N. Wolf .....	Scranton
Otis C. McCreery, Chairman .....	Bridgeville

**ADMINISTRATIVE STAFF**

James Gemmell, B.S., M.S., Ed.D. ...	President
David A. Hilton, B.S., M.Ed., Ed.D. ...	Assistant to the President

**ACADEMIC SERVICES**

James D. Moore, A.B., Ed.M. ....	Dean of Academic Affairs
Dana S. Still, B.S., M.A., Ph.D.	Assistant Dean of Academic Affairs
Charles J. Shontz, B.S., M.S., Ph.D.	Ass't to Dean of Academic Affairs
Harold E. Simmons, B.A., M.S., Ed.D.	Dean of Professional Studies
John Mellon, B.S., M.Litt., Ph.D.	Dean of Liberal Arts
Russell L. V. Morgan, B.S., M.Ed., Ed.D.	Director of Venango Campus
William J. Page, B.S., M.Ed., Ed.D.	Director of Student Teaching and Placement
Alpha E. Bernard, B.S., M.S.Ed., Ed.D.	Director of Elementary Education
Kenneth G. Vayda, B.S., M.S.	Director of Special Education
Elizabeth A. Rupert, B.S., M.S.L.S.	Director of Library Science
Dan W. Graves, B.A., M.A. ....	Head Librarian

### STUDENT SERVICES

Allan R. Elliott, A.B., M.A., Ed. D. ....	Dean of Students
Charles D. Thomas, B.A., M.A. ....	Dean of Men
Thomas B. Martin, B.S., M.S., Ed. D.	
	Director of Financial Aids
Frank Lignelli, Jr., B.S., M. Ed. ....	Director of Athletics
Edward J. Keeling, M.D. ....	College Physician
Florence B. Megahan, R.N. ....	Head Nurse

### GENERAL SERVICES

Walter L. Hart, B.A., M.F.A. ....	Director of Admissions
Richard Loester, B.A., M.A. ....	Associate Director of Admissions
Phyllis L. Elder ....	Registrar
Willard M. Mecklenburg, B.A., B.D., M.S.	Director of Public Relations
Foster M. Burton, B.S., M.B.A.	Director of College Development
Robert E. Nigro, B.S., M.Ed. ....	Business Manager
Bernard D. McEntire	Superintendent of Buildings and Grounds

## FACULTY

- James Gemmell, Ed.D. . . . . President  
University of Wyoming, B.S.; Syracuse University; State University of New York, Albany, M.S.; New York University, Ed.D.
- Leonard M. Abate, M.A., Instructor, History  
Northern Illinois University, B.A., M.A.
- Ernest C. Aharrah, M.S., Associate Professor, Biological Science  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.; University of Pittsburgh, M.S.
- Prabhakar S. Akolekar, Ph.D., Professor, Economics  
Holkar College, Indore, India; Bombay University, M.A.; University of Virginia, M.A.; Research Fellow, Johns Hopkins; University of Pennsylvania, Ph.D.
- John R. Arscott, Ph.D., Professor, English  
College of Wooster, B.A.; Princeton University, M.A.; New York University, Ph.D.
- Edgar W. Averill, Ph.D., Professor, Mathematics and Statistics  
Cornell University, A.B.; Harvard University, M.B.A.; University of Michigan, Ph.D.
- Inez Fay Baker, M.A., Associate Professor, Audio-Visual Education  
University of Cincinnati, B.S.; T. C. Columbia University, M.A.; Additional graduate work, Columbia University.
- Mary Kay Banner, M.Ed., Assistant Professor, Demonstration Teacher, Intermediate Grades  
Seton Hill College, B.A.; Clarion State College; University of Pittsburgh, M.Ed.; Additional graduate work at University of Pittsburgh.
- Francis Baptist, M.F.A., Associate Professor, Art  
Wisconsin State College, B.S.; State University of Iowa, M.F.A.; Additional graduate work at Pennsylvania State University.
- Gwendolyn M. Bays, Ph.D., Professor, French & German  
Agnes Scott College, B.A.; Emory University, M.A.; Yale University, Ph.D.; Additional graduate study at the University of Paris (Sorbonne) and the University of Heidelberg (Germany).
- Robert A. Bays, Ph.D., Professor, Head of Foreign Language Department  
Emory University, B.A.; Yale University, M.A., Ph.D.; Additional study at the National University of Mexico, the University of Queensland (Australia) and the University of Heidelberg (Germany).
- Mary M. Bechtold, M.S., Assistant Professor, Physical Science  
Duquesne University, B.S.; Duquesne University, M.S.; Additional graduate work at Western Reserve University.
- Paul E. Beck, Ph.D., Associate Professor of Chemistry  
Franklin and Marshall, B.S.; Duquesne University, Ph.D.

- Thomas L. Beck, M.A., Assistant Professor of Health & Physical Education  
Slippery Rock State College, B.S.; Duquesne University, M.A.; Additional graduate work, University of Maryland and University of Delaware.
- Stanley A. Belfore, M.S., Assistant Professor, Biological Science Indiana State College, B.S. in Ed.; University of Pittsburgh, M.S.
- Vahe H. Berberian, Mus. Dipl., Associate Professor, Music Lebanese Academy of Fine Arts, Mus. Dipl.; Mozarteums International Summer Academy, Mus. Cert.; Doctoral Candidate, Indiana University.
- Alpha E. Bernard, Ed.D., Professor, Education Northern Michigan College of Education, B.S.; Graduate work at University of Michigan; Indiana University, M.S. in Ed., Ed.D.
- Patricia Ann Billiau, M.A., Instructor, Education, Dean of Women Ball State Teachers College, B.S., M.A.
- Charles Henry Blochberger, M.Ed., Associate Professor, Education, Head Counselor University of Scranton, B.S.; University of Maryland, M.Ed.; Doctoral candidate, Michigan State University
- Christian Bohlen, M.M., Associate Professor, Music Amsterdam Conservatory of Music, Mus. Dipl.; Indiana University, M.M.; Additional graduate work Indiana University.
- Elizabeth Pearl Bonner, M.Ed., Instructor, Demonstration Teacher, Third Grade Clarion State College, B.S. in Education; Edinboro State College, M.Ed.; Additional work at Pennsylvania State University.
- Olive C. Bower, Ph.D., Assistant Professor, Chemistry Florida Southern, B.A.; Pennsylvania State University, M.A.; Ph.D.
- Lloyd S. Bromley, M.Ed., Assistant Professor, Physical Science Allegheny College, B.S.; University of Pittsburgh, M.Ed.; Additional study at Union College, University of Pittsburgh, Leybold Laboratory, Cologne, Germany.
- Robert G. Bubb, B.S., Instructor, Health & Physical Education University of Pittsburgh, B.S.
- Margaret V. Buckwalter, M.L.S., Instructor-Librarian University of Michigan, B.S., M.A.; University of Pittsburgh, M.L.S.
- Tracy V. Buckwalter, Ph.D., Professor, Geology University of Michigan, B.S., M.S., Ph.D.
- Foster M. Burton, M.B.A., Associate Professor of Economics, Director of College Development Carnegie Institute of Technology, B.S.; New York University, M.B.A.; Additional graduate work, University of Delaware, Fordham University.
- O. Mell Busbin, Jr., M.A. in Lib. Sci., Assistant Professor, Library Science High Point College, A.B.; Appalachian State, M.A.L.S.

- Mary M. Butler, M.L.S., Assistant Professor, Librarian  
University of Pittsburgh, B.A., Carnegie Institute of Technology,  
M.L.S.; Additional study at Columbia University.
- Catherine L. Cain, M.A., Instructor, Speech  
East Tennessee State College, B.S.; Ohio University, M.A.
- Carl E. Caldwell, M.A., Associate Professor, French  
Hobart College, A.B.; Middlebury College, M.A.; Additional graduate work, McGill University, the Sorbonne, Middlebury College, University of Rochester.
- Frank M. Campbell, M.A., Assistant Professor, Social Studies  
Grove City College, B.A.; Pennsylvania State University, M.A.
- Thomas A. Carnahan, M.Ed., Associate Professor, Mathematics,  
Physical Science  
Grove City College, B.S.; Pennsylvania State University, M.Ed.;  
Additional graduate work at University of Southern California, University of Pittsburgh.
- Earl Chalfant, M.Ed., Associate Professor of Education  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.;  
Doctoral Candidate, Pennsylvania State University.
- William D. Chamberlain, Ed.D., Professor, Science Ed.  
Wayne State University, B.S., M.Ed., Ed.D.
- Alfred B. Charley, M.F.A., Assistant Professor, Art  
Southern Illinois University, B.S.; Southern Illinois University, M.F.A.; Additional graduate work at the University of Minnesota, Carnegie Institute of Technology.
- Paul A. Clarke, Ed.D., Professor of Psychology  
Mount St. Mary's College, B.S.; University of Maryland, M.Ed., Ed.D.
- John B. Cliff, B.S., Instructor, Mathematics  
Clarion State College, B.S.; Additional graduate work at Pennsylvania State University, the University of Buffalo, the University of Arkansas, and Rutgers University.
- William F. Combs, Ph.D., Professor, Psychology  
University of West Virginia, B.A., M.A.; University of Oklahoma, Ph.D.
- Dalph O. Cook, M.S., Assistant Professor, Biology  
Clarion State College, B.S.; Syracuse University, M.S.; Additional graduate work at Central Michigan University and Pennsylvania State University.
- Doris E. Cooper, B.S., Instructor, English  
Clarion State College, B.S.; Graduate work at Kent State University.
- Bob H. Copeland, M.A., Associate Professor, Speech  
University of Wichita, B.A.; University of Denver, M.A.; Additional work at University of Mexico City, Director's Studio of New York City, Long Beach State, University of Denver.
- Alastair T. Crawford, M.A., Assistant Professor, Social Sciences  
Upsala College, B.S.; Montclair State College, M.A.; Additional graduate work at University of Colorado and Northern Illinois University.
- Robert E. Crawford, M.A., Assistant Professor, Geography  
Slippery Rock State College, B.S.; University of Pittsburgh, M.A.; Additional graduate work at the University of Washington.

- Peggy S. Curry, B.S., Demonstration Teacher, Kindergarten  
Indiana State College, B.S. in Education.
- Donald H. Dininny, M.Ed., Instructor, Speech  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.;  
Additional graduate work at Ohio University.
- Bruce H. Dinsmore, Ph.D., Professor, Head, Department of  
Biological Sciences  
Indiana State College, B.S.; Columbia University, M.A.; University  
of Pittsburgh, M.S., Ph.D.
- James A. Donachy, M.S., Associate Professor, Biological Science  
Clarion State College, B.S.; Ohio University, M.S.; Additional  
graduate work at Pennsylvania State University.
- Edward G. Duffy, M.A., Associate Professor, History  
Pennsylvania State University, B.A., M.A.; Additional graduate  
work at Pennsylvania State University.
- Charles Economous, M.S., Assistant Professor, Library Science  
University of North Carolina, B.A., M.S. in L.S.
- Allan R. Elliott, Ed.D., Professor, Dean of Students  
Western Michigan University, B.A., Stanford University, M.A.,  
Ed.D.
- Kenneth F. Emerick, M.L.S., Assistant Professor, Librarian  
Clarion State College, B.S.; Rutgers University, M.L.S.
- Glenn E. Estes, M.L.S., Assistant Professor, Library Science  
University of Akron, B.A., Kent State University, M.L.S.
- Gilford Frazee, M.S., Associate Professor, Economics  
West Liberty State College, B.A.; West Virginia University, M.S.;  
Additional graduate work at University of Pittsburgh, American  
University.
- Jose G. Garcia, M.A., Associate Professor, Spanish  
University of Valencia, B.A., M.A.; Additional graduate work at  
the University of Colorado.
- Mary Ann Garcia, B.A., Instructor, Physical Education  
State University of Iowa, B.A.
- Ray K. Giering, M.Ed., Assistant Professor, Education  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.;  
Additional graduate work at Pennsylvania State University and  
Temple University.
- Rachel M. Glenn, B.S., Instructor, Librarian  
Simmons College, B.S. in L.S.
- Dan W. Graves, A.M., Associate Professor, Head Librarian  
University of Denver, A.B.; University of Michigan, A.M.; Additional  
graduate study at the University of Michigan.
- Edward S. Grejda, M.Litt., Associate Professor, English  
Clarion State College, B.S.; University of Pittsburgh, M.Litt.;  
Additional graduate study at University of Pittsburgh and Catholic  
University of America.
- William E. Grosch, M.Ed., Assistant Professor, Art  
Edinboro State College, B.S.; Pennsylvania State University,  
M.Ed.; Additional graduate study at Haystack Mountain School  
of Crafts and Pennsylvania State University.

- Joel L. Haines, Ph.D., Professor, Head, Social Science Department  
Franklin and Marshall College, B.A.; University of Pennsylvania, M.A., Ph.D.
- George A. Harmon, Ph.D., Professor of Biology  
University of California at Los Angeles, A.B.; Stanford University, M.A., Ph.D.
- Walter L. Hart, M.F.A., Professor, Director of Admissions Admissions  
Grove City College, B.M.; Carnegie Institute of Technology, M. of F.A.; Additional graduate work at St. Bonaventure College, University of Pittsburgh, New York University.
- William J. Hart, Ph.D., Professor, Chemistry  
George Washington University, A.B., M.A.; University of Maryland, Ph.D.
- Harold V. Hartley, Jr., M.Ed., Associate Professor, Special Education, Coordinator of Speech and Hearing Services  
Bloomsburg State College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate work at Pennsylvania State University, Colorado State University, Western Reserve University.
- David A. Hilton, Ed.D., Professor, Assistant to the President  
Ohio State University, B.S.; University of Cincinnati, M.Ed.; Wayne State University, Ed.D.
- Amelia Hoover, M.A., Associate Professor, Speech  
Wayne State University, B.A., M.A.; Doctoral candidate at University of Michigan.
- Janice C. Horn, A.M.L.S., Assistant Professor-Librarian  
Luther College, B.A.; University of Michigan, A.M.L.S.
- Roger H. Horn, A.M.L.S., Assistant Professor-Librarian  
Louisiana State University, B.M.E.; University of Michigan, A.M.L.S.
- Roger Hufford, Ph.D., Professor, Speech, Director of Forensics  
Illinois State Normal, B.S., M.S.; King's College, Durham University, England, M.Litt.; Southern Illinois University, Ph.D.
- Norman B. Humphrey, M.S., Associate Professor, Geography  
Slippery Rock State College, B.S.; Florida State University, M.S.; Additional graduate work at Pennsylvania State University.
- Roxana Irwin, M.S. in Ed., Assistant Professor, Demonstration Teacher, Intermediate Grades  
Clarion State College, B.S.; Westminster College, M.S. in Ed.; Additional graduate work at Pennsylvania State University.
- Albert A. Jacks, Jr., M.Ed., Assistant Professor, Health and Physical Education  
Pennsylvania State University, B.S., M.Ed.
- Arnold L. Jeschke, M.Ed., Instructor, English  
Edinboro State College, B.S., M.Ed.
- Ernest W. Johnson, M.Ed., Associate Professor, Education  
Clarion State College, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work at Kent State University, University of Pittsburgh.

- Margery C. Johnson, B.S., Instructor, Laboratory School Librarian  
Geneva College; Clarion State College, B.S.; Graduate work at Pennsylvania State University.
- James R. Jorgen, A.M.T., Associate Professor of English  
University of Minnesota, B.A.; Harvard University, A.M.T.; Additional graduate work, University of Virginia, Brown University, Harvard University, and Oxford University.
- John A. Joy, M.Ed., Assistant Professor, Health and Physical Education  
Slippery Rock State College, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work at University of Pittsburgh.
- William J. Karl, M.A., Assistant Professor, English  
Michigan State University; Clarion State College, B.S.; Columbia University, M.A.; Additional graduate work at University of Pittsburgh.
- Thomas Karwaki, M.A., Associate Professor of History  
State University of New York, B.S.; Western Reserve University, M.A.; Additional graduate work at the University of Michigan and the University of Chicago.
- Clifford M. Keth, M.Ed., Associate Professor, Physical Science  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate work, Harvard University.
- ✓ Rais A. Khan, M.A., Associate Professor, Political Science  
University of Dacca, Pakistan, B.A., M.A.; University of Michigan, M.A.
- Elaine M. King, M.Ed., Instructor, English  
Southwestern Oklahoma State College, B.A.; Indiana State College, M.Ed.; Additional graduate work at Pennsylvania State University, University of Pittsburgh.
- James C. King, Ph.D., Professor, Social Studies, Director of Academic Counseling  
Northeastern Oklahoma State College, B.A.; University of Utah, Ph.D.
- Terje Kjeldaas, L.L.B., Associate Professor, Physics  
Lillehammer, B.A. equivalent; University of Oslo, L.L.B., Doctoral study in Physics.
- Joseph J. Knowles, M.Ed., Associate Professor, Health and Physical Education  
Waynesburg College, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work at Pennsylvania State University.
- ✗ Helen Knuth, Ph.D., Professor, History  
University of Dubuque, A.B.; Northwestern University, M.A., Ph.D.
- ✗ Gustav A. Konitzky, Ph.D., Professor, Anthropology, Curator of Museum  
University of Giessen, (B.S. equiv.); University of Bonn (B.A. equiv.); University of Kiel, Purdue University, M.S.; Indiana University, Ph.D.; Post-doctoral Research Associate, Indiana University.

- ✓ Margaret M. Kordecki, M.A., Instructor, Geography  
Western Michigan University, B.S., M.A.; University of Hawaii, M.A.
- John A. Laswick, Ph.D., Professor, Chemistry  
University of Colorado, B.A.; Cornell University, Ph.D.
- Donald E. Leas, M.S., Associate Professor, Health and Physical Education  
Michigan State University, B.S.; Southern Illinois University, M.S.; Additional graduate work, University of Illinois.
- ✓ George R. Lewis, Ed.D., Professor, Director of Computer Center  
East Stroudsburg State College, B.S.; University of Pittsburgh, M.Litt.; Graduate work at Bucknell University; Pennsylvania State University, Ed.D.
- Frank Lignelli, M.Ed., Associate Professor, Director of Athletics  
Clarion State College, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work at Pennsylvania State University.
- ✓ Irving Lilly, Ph.D., Professor, Psychology  
Temple University, B.S., M.A., Ph.D.
- ✓ Walter E. Lockhart, M.A., Instructor, Philosophy  
Gordon College, B.A.; Boston University, M.A.; Doctoral candidate at Boston University.
- Richard Loester, M.A., Assistant Professor, Associate Director of Admissions  
Syracuse University, B.A., M.A.
- John G. Mager, M.L.S., Associate Professor, Librarian  
Concordia College of St. Louis, B.A., B.D., S.T.M.; Washington University, M.A.; University of California, M.L.S.; Additional work at Oakland City College, Akron University, Western Reserve University.
- ✓ Charles L. Marlin, M.A., Associate Professor of Speech  
University of Missouri, B.S.; Indiana University, M.A.; Doctoral candidate, Indiana University.
- Thomas B. Martin, Ed.D., Professor, Director of Financial Aids  
Northeast Missouri State Teachers College, B.S.; University of Tennessee, M.S.; Indiana University, Ed.D.
- Allene H. Masterson, M. Litt., Associate Professor, French and Spanish  
Geneva College, B.A.; University of Pittsburgh, M.Litt.; Additional graduate work at the University of Pittsburgh and Duke University.
- Garrison A. McCaslin, M.A., Instructor, Biological and Physical Science  
Lock Haven State College, B.A.; Pennsylvania State University, M.A.
- ✓ James E. McDaniel, A.M.L.S., Assistant Professor, Librarian  
Eastern Michigan University, B.A., M.A.Ed.; University of Michigan, A.M.L.S.
- William M. McDonald, M.A., Associate Professor, Music  
Indiana State College, B.S.; New York University, M.A.; Additional graduate work, University of West Virginia

- Nancy S. McKee, M.L.S., Assistant Professor, Librarian  
Wilson College, A.B.; Carnegie Institute of Technology, M.L.S.
- John D. McLain, Ed.D., Professor, Director, Center for Educational Research  
Southern Oregon College, B.S.; University of Oregon, M.Ed., Ed.D.
- Donald T. McNelis, Ed.D., Associate Professor, Education  
Bloomsburg State College, B.S.; George Washington University, M.A., Ed.D.
- Kenneth R. Mechling, M.A., Associate Professor of Biology  
Indiana University of Pennsylvania, B.A., M.A.; Additional graduate work, Northern Illinois University, University of Pittsburgh, Doctoral candidate, Michigan State University.
- Willard M. Mecklenburg, M.S., Instructor, English, Director of Public Information  
Hamline University, B.A.; Garrett Biblical Institute, B.D.; Northwestern University, M.S.
- John Mellon, Ph.D., Professor, Dean of Liberal Arts  
Clarion State College, B.S.; University of Pittsburgh, M.Litt., Ph.D.; Additional graduate work at the University of Colorado and the Pennsylvania State University.
- Stoyan M. Menton, M.A., Associate Professor, Sociology  
Wayne State University, B.A., M.A.; Additional graduate work at University of London, Michigan State University, University of Wisconsin.
- James Metress, M.A., Assistant Professor of Anthropology  
University of Notre Dame, B.S.; Columbia University, M.A.; Additional graduate work, Ohio Wesleyan University, Western Michigan University, Indiana University, Purdue University.
- Stanley F. Michalski, Jr., Associate Professor, Music, Director of College Bands  
Pennsylvania State University, B.S., M.Ed.; Additional graduate work at Wyoming Seminary, Pennsylvania State University, University of Pittsburgh.
- J. Rex Mitchell, M.E.M., Assistant Professor of Music  
Muskingum College, B.S.; Kent State University, M.E.M.; Additional graduate work at the University of Michigan.
- Melvin A. Mitchell, M.Ed., Assistant Professor, Mathematics  
Indiana State College, B.S., M.Ed.; Additional graduate work, Pennsylvania State University.
- Calvin W. Moats, M.Ed., Assistant Professor, Geography, Physical Science  
California State College, B.S., University of North Carolina, M.Ed.; Additional work at Ohio State University.
- Lester D. Moody, Ph.D., Professor, Head of English Department  
Washington State University, B.A.; University of Washington, M.A., Ph.D.
- Eleanor D. Moore, M.S.L.S., Associate Professor, Library Science  
Clarion State College, B.S.; Additional work at Allegheny College; University of Pittsburgh, M.Ed.; School of Library Service, Columbia University, M.S.L.S.

- James D. Moore, Ed.M., Professor, Dean of Academic Affairs  
Muskingum College, A.B.; University of Pittsburgh, M.Ed.
- J. Robert Moore, Ph.D., Associate Professor, Biology  
Clarion State College, B.S.; University of Pittsburgh, M.S., Ph.D.
- John N. Moorhouse, M.Ed., Associate Professor, Education  
California State College, B.S.; University of Pittsburgh, M.Ed.;  
Additional graduate study at University of Pittsburgh and Uni-  
versity of Utah. Doctoral candidate, Pennsylvania State Univer-  
sity.
- Russell L. V. Morgan, Ed.D., Professor, Administrative Head of  
Venango Campus  
Slippery Rock State College, B.S.; University of Pittsburgh, M.Ed.,  
Ed.D.; Additional work at Allegheny College and Carnegie Insti-  
tute of Technology.
- W. Lee Morrison, M.A., Associate Professor of Psychology  
Nebraska State Teachers College, B.S.; University of Denver,  
M.A.; Additional graduate work, University of Denver.
- Elbert R. Moses, Jr., Ph.D., Professor, Head of Speech Depart-  
ment  
University of Pittsburgh, A.B.; University of Michigan, M.S.,  
Ph.D.; Additional graduate work at Eastern Illinois State Uni-  
versity, Northwestern University School of Speech.
- Paul R. Mosser, M.A., Associate Professor, Education  
Kutztown State College, B.S.; Lehigh University, M.A.; Additional  
graduate work, Rutgers University.
- Gilbert Neiman, Ph.D., Professor, English  
Regis College; University of Colorado, B.A.; University of New  
Mexico, M.A., Ph.D.
- Max A. Nemmer, Ph.D., Professor, English  
University of Pittsburgh, B.A., M.L., Ph.D.
- Henry W. Newman, M.A., Associate Professor, English  
Sampson College; Syracuse University, B.A.; University of Penn-  
sylvania, M.A.; Additional graduate work at Temple University  
and State University of New York at Buffalo.
- Robert L. Northey, M.A., Assistant Professor, Mathematics  
Clarion State College, B.S.; Rutgers University, M.A.
- Joseph C. Nucci, M.Litt., Associate Professor, English  
University of Notre Dame, A.B.; University of Pittsburgh, M.Litt.;  
Additional graduate work, University of Pittsburgh.
- Lester C. Oakes, M.S., Associate Professor, Geography  
Teachers College of Connecticut, B.Ed.; New York University,  
M.A.; Union College, Schenectady, N.Y., M.S.; Teachers College,  
Columbia University, Professional Diploma
- Galen L. Ober, M.Ed., Assistant Professor, Physical Science  
Indiana State College, B.A.; University of Pittsburgh, M.Ed.; Ad-  
ditional graduate work at University of Wisconsin, Oregon State,  
Georgia Institute of Technology.
- Michel G. Ossesia, Ph.D., Professor, Head of Mathematics De-  
partment  
University of Pittsburgh, B.S., M.Litt., Ph.D.

- Donald R. Pagano, M.S., Assistant Professor, Mathematics  
Duquesne University, B.S.; Syracuse University, M.S.; Additional graduate work at University of Pittsburgh.
- William J. Page, Ed.D., Professor, Director of Student Teaching and Placement  
Fredonia State Teachers College; Temple University, B.S., M.Ed., Ed.D.
- Frank A. Palaggo, M.Ed., Associate Professor, Education  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate work at Pennsylvania State University.
- Hugh Winston Park, Ph.D., Professor, English  
Hiram College, B.A.; Western Reserve University, M.A.; University of Utah, Ph.D.
- Charles G. Pearce, M.Ed., Assistant Professor, Art  
Indiana State College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate study Pennsylvania State University.
- Donald D. Peirce, Ph.D., Professor, Head of Physical Science Department  
Oberlin College, A.B.; Attended Clarion State Normal School; Graduate work at University of Pittsburgh, Pennsylvania State University; University of Illinois, M.A., Ph.D.
- Lawrence L. Penny, Ed.D., Professor, Psychology  
Oklahoma State University, B.S. in Ed., M.S.; Kansas University, Ed.D.
- Werner H. Peterke, M.A., Assistant Professor, Economics  
Jamestown Community College, Cornell University, B.S.; Kent State University, M.A.; Additional graduate work, University of Illinois; Lehigh University.
- Leonard A. Pfaff, M.A., Associate Professor, Audio-Visual Education  
Southwest Missouri State College, B.S.; George Peabody College, M.A.; Additional graduate work at the University of Indiana.
- Glenn B. Phipps, M.Ed., Assistant Professor, Speech  
College of Emporia, A.B.; University of Pittsburgh, M.Ed.; Additional work at Drew University, University of Missouri, Northwest Missouri State College, Pennsylvania State University, Iliff School of Theology, University of Pittsburgh, University of Kansas City.
- Robert R. Pictor, Instructor, Audio-Visual Education, Coordinator of Educational Television  
Indiana University, B.S., M.S.
- Andor S. P-Jobb, M.F.A., Assistant Professor, Art  
Art Academy of Budapest; Kent State University, B.F.A., M.F.A.
- Suzanne P-Jobb, A.B., Instructor, Russian  
Kent State University, A.B.
- ✉ Helen Poulos, M.M., Instructor, Music  
Philadelphia Musical Academy, B.M., M.M.; Doctoral candidate, Indiana University.
- Morrell B. Pratt, M.Ed., Associate Professor, Spanish (Part-time)  
Westminster College, B.A.; Pennsylvania State University, M.Ed.

- Donald R. Predmore, Ph.D., Professor, Biological Science  
Miami University; University of Pittsburgh, B.S., M.A., Ph.D.;  
Additional graduate work at University of Colorado, University of Southern California, Columbia University, University of Miami.
- George W. Price, Ed.S., Assistant Professor, Audio-Visual Education  
Brigham Young University, B.A.; Indiana University, M.S., Ed.S.;  
Additional graduate work, Indiana University.
- Leticia S. Ramirez, M.A., Associate Professor, English  
University of Philippines, B.S.; University of Missouri, M.A.; University of Pittsburgh, M.A., Doctoral candidate, University of Pittsburgh.
- William A. Redin, M.Ed., Assistant Professor, Physical Science  
Pennsylvania State University, B.S., M.Ed.; Syracuse University, M.S.
- John F. Reinhardt, M.A., Assistant Professor, English  
Grove City College, B.A.; New York University, M.A.; Additional graduate work at the University of Pittsburgh.
- Susan E. Reinhardt, M.Ed., Assistant Professor of Psychology  
Grove City, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work, University of Pittsburgh.
- Eugene L. Rhoads, M.S. in Ed., Assistant Professor, Mathematics  
Clarion State College, B.S.; University of Pennsylvania, M.S. in Ed.; Additional graduate work, University of Chicago and University of Kansas.
- Charles W. Robbe, M.A., Assistant Professor, Social Sciences  
University of Iowa, University of Illinois, B.S.; University of Vermont, M.A.; Additional graduate study, University of California, University of Texas, Harvard University.
- Richard C. Romoser, Ed.D., Professor of Psychology  
Milton College, B.S.; University of Denver, M.A., Ed.D.
- Edward Roncone, B.A., Assistant Professor, Music  
Carnegie Institute of Technology, B.A.; Additional work at Carnegie Institute of Technology; Berkshire Music Center; Life Fellow, International Institute of Arts and Letters; Conductor's Symposium, Philadelphia Orchestra; Doctoral candidate at West Virginia University.
- Mildred E. Ross, Ed.D., Associate Professor, Education  
West Chester State College, B.S.; Pennsylvania State University, M.S., Ed.D.
- Elizabeth A. Rupert, M.S. in L.S., Associate Professor, Director of Library Science  
Clarion State College, B.S.; Syracuse University, M.S. in L.S.; Additional work at University of Pittsburgh.
- Charles A. Ruslavage, M.Ed., Assistant Professor, Physical Education  
Pennsylvania State University, B.S., M.Ed.; Additional graduate work at Slippery Rock State College.

Roy A. Schreffler, M.Ed., Associate Professor of Special Education

Juniata College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate work at the University of Pennsylvania and Pennsylvania State University.

Susan Secor, M.L.S., Instructor-Librarian

Pennsylvania State University, B.A.; University of Pittsburgh, M.L.S.

Eugene A. Seelye, M.A., Assistant Professor, Art

Indiana State College, B.S.; Columbia University, M.A.

Paul L. Shank, Ph.D., Professor, Physical Science

Bethany College, B.S.; Graduate work, University of West Virginia; University of Pittsburgh, M.Ed., Ph.D.

Daniel K. Shirey, Jr., M.S., Associate Professor, Special Education

Pennsylvania State University, B.S., M.S.; Additional graduate work at Pennsylvania State University.

Donna J. Shirey, M.Ed., Assistant Professor, Demonstration Teacher, Sixth Grade

Indiana State College, B.S.; Pennsylvania State University, M.Ed.

George S. Shirey, M.A., Associate Professor of Geography

Slippery Rock State College, B.S.; Miami University, M.A.; Additional graduate work, University of Pittsburgh.

James D. Shofestall, M.Ed., Associate Professor, Physical Science

Clarion State College, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work at Brown University, Pennsylvania State University, Michigan State University, Texas A & M, and University of Michigan.

Charles J. Shontz, Ph.D., Professor, Assistant Dean of Academic Affairs

Indiana State College, B.S.; University of Pittsburgh, M.S., Ph.D.; Additional graduate work, University of Minnesota.

✉ Ronald C. Shumaker, M.A., Instructor, English

Clarion State College, B.S.; Purdue University, M.A.

Harold E. Simmons, Ed.D., Professor, Dean of Professional Studies

Iowa State Teachers College; Buena Vista College, B.A.; Drake University, M.S.; Teachers College, Columbia University, Ed.D.

Betty Simpson, B.S., Instructor, Health and Physical Education  
West Chester State College, B.S. in Health and Physical Education.

Edwin R. Simpson, M.A., Assistant Professor of Speech Pathology and Audiology

Bloomsburg State College, B.S.; University of Iowa, M.A.; Additional graduate work, University of Iowa.

✉ Sarjit Singh, Ph.D., Professor, Economics

Punjab University, B.A., M.A.; Oklahoma State University, Ph.D.

Richard C. Skinner, M.Ed., Associate Professor, Education

West Illinois State Teachers College, B.Ed.; Northwestern University, M.A.; University of Illinois, M.Ed.; Additional graduate work at University of Illinois, University of Pennsylvania.

- Betty R. Slater, Ed.D., Professor, Education  
Buffalo State College, B.S. in Ed.; University of Buffalo, M.Ed., Ed.D.
- DeWayne E. Slaugenhouette, M.S., Assistant Professor, Physical Science  
Clarion State College, B.S.; University of Pittsburgh, M.Ed., Clarkson College of Technology, M.S.; Additional work at Pennsylvania State University and Worcester Polytechnic Institute.
- Lawrence A. Smith, Ed.D., Associate Professor, Education  
Clarion State College, B.S.; University of Pittsburgh, M.Ed., Ed.D.
- Joseph R. Spence, M.Ed., Associate Professor, Head of Art Department  
Edinboro State College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate work, Syracuse University, Pennsylvania State University.
- Dana S. Still, Ph.D., Professor, Assistant Dean of Academic Affairs  
Ohio State University, B.S., M.A.; University of Pittsburgh, Ph.D.
- Richard Summerville, M.A., Associate Professor, Mathematics  
Clarion State College, B.S.; Washington University, M.A.; Additional graduate work at Kent State University, the University of Pittsburgh, and Syracuse University.
- Imogene Sumner, M.A., Assistant Professor, History  
Coe College, B.A.; University of Chicago, M.A.; Additional graduate work at University of Chicago.
- Zoe Swecker, Ph.D., Professor, History  
Women's College of Greensboro, A.B.; University of Chicago, Ph.D.
- Franklin S. Takei, Ph.D., Associate Professor, Philosophy  
University of Hawaii, B.A.; Fuller Theological Seminary, B.D.; University of Hawaii, M.A.; Pennsylvania State University, Ph.D.
- Paul N. Terwilliger, M.A., Associate Professor, Education  
Clarion State College, B.S.; Lehigh University, M.A.; Additional graduate work, Temple University and Pennsylvania State University.
- Charles D. Thomas, M.A., Associate Professor, Dean of Men  
University of Michigan, B.A., M.A.; Additional graduate work, University of Michigan, Ph.D. candidate.
- Christine M. Totten, Ph.D., Associate Professor, German  
University of Berlin; University of Heidelberg, Ph.D.; Additional graduate study at the University of Chicago.
- Don E. Totten, Ph.D., Professor, Head of Geography Department  
University of Chicago, M.A.; University of Heidelberg, Ph.D.
- Raymond P. Tripp, Jr., M.A. Assistant Professor, English  
University of Massachusetts, B.A.; University of Toronto, M.A. and Doctoral Candidate.
- Ngo Dinh Tu, M.A., Associate Professor, Political Science  
National College, Vietnam, B.A.; American University, M.A.; Additional graduate work, Harvard University, Reserve Officer's School, Vietnam.
- Joseph Uzmack, Ed.D., Associate Professor, Education  
Clarion State College, B.S.; Indiana State College, M.Ed., Pennsylvania State University, Ed.D.

- Kenneth G. Vayda, M.S., Associate Professor, Director, Special Education Curriculum  
Pennsylvania State University, B.S., M.S.; Additional graduate work, Pennsylvania State University.
- ✓ Jay Van Bruggen, M.A., Assistant Professor, Political Science  
Calvin College, B.A.; Western Michigan University, State University of Iowa, M.A.; Additional graduate work at Michigan State University, University of Nebraska.
- Robert S. Van Meter, D.Mus., Professor, Acting Head of Music Department  
Juilliard School of Music, B.S., M.S.; Indiana University, D.Mus. in Performance (Piano).
- ✗ Adam F. Weiss, Ph.D., Assistant Professor, Speech  
University of Pennsylvania, B.A.; University of Denver, M.A., Ph.D.
- † Margaret J. Wiant, M.Litt., Associate Professor, Geography  
Graduate of Clarion State Normal School; Clarion State College, B.S.; University of Pittsburgh, M.Litt.; Graduate work at University of Washington, Duke University, University of Colorado, Pennsylvania State University.
- Pauline M. Wiberg, B.S., Instructor, Demonstration Teacher, Primary Grades  
Clarion State College, B.S.
- Samuel A. Wilhelm, Ph.D., Professor, Social Sciences  
Clarion State College, B.S.; University of Pittsburgh, M.Litt., Ph.D.; Graduate work University of Wisconsin and Harvard University.
- John E. Williams, Ph.D., Associate Professor, Biological Science  
Pennsylvania State University, B.S.; University of Illinois, Ph.D.
- Mary Elizabeth Williams, B.S., Instructor, Librarian  
Clarion State College, B.S.; Additional graduate study at Pennsylvania State University, University of Pittsburgh.
- Lucile Willowby, M.A., Associate Professor, Education  
Southwestern State College, B.A.; Butler University, M.A.; Additional graduate work, University of Oklahoma.
- George F. Wollaston, M.Ed., Assistant Professor, Physical Science  
Clarion State College, B.S.; Pennsylvania State University, M.Ed.; Additional graduate work at Case Institute of Technology, Purdue University and Pennsylvania State University.
- J. Kenneth Wyse, M.S. in Lib. Sci., Assistant Professor, Librarian  
Clarion State College, B.S.; Western Reserve University, M.S. in L.S.; Additional graduate study Western Reserve University, University of Pittsburgh.
- Gloria A. Yough, M.A., Assistant Professor, Health and Physical Education  
University of Michigan, B.S., M.A.
- Richard Zallys, M.A., Instructor, Philosophy  
University of Chicago, B.A., M.A.; Doctoral candidate, University of Indiana.

**EMERITI**

**Paul G. Chandler, Ph.D., (President Emeritus)**

Kentucky Wesleyan, B.A.; Columbia University, M.A., Ph.D.

**Charles F. Becker, M.A.**

Mt. Union College, Ph.B.; Teachers College, Columbia University, M.A.; Additional graduate work at Columbia; Pennsylvania State University; University of Pittsburgh.

**Evelyn J. Strohecker, M.A.**

Susquehanna University, B.S.; Columbia University, M.A.; Additional graduate work Columbia University.

**Hazel Sandford, M.A.**

Graduate, State Normal School, Fredonia, N.Y.; Cornell University, B.S.; Graduate work, Teachers College, Columbia University; New York School of Fine Arts; New York University, M.A.; Thurn School of Modern Art; Carnegie Institute of Technology; University of Pittsburgh; Study in Europe.

**Bertha V. Nair, M.A.**

Westminster College, B.A.; University of Pittsburgh, M.A.; Additional graduate work, Harvard University; University of Wisconsin.

**Margaret A. Boyd, M.A.**

Graduate, two-year course, Bethany College; University of Pittsburgh, B.A., M.A.; Additional graduate work at University of Wisconsin; Oxford University, Oxford, England; University of California, Columbia University.

**Marie Marwick, M.A.**

Michigan State Normal College, B.Pd.; University of Arizona, B.A.; Columbia University, M.A.; Additional graduate work, University of Pittsburgh; University of California.

**C. A. Kuhner, M.S.**

Ohio University, B.S.; University of Wisconsin, M.S.; Additional graduate work at University of Chicago; University of Pittsburgh.

**Martha T. Riley, M.A.**

Graduate, Farmville State Normal School; George Washington University, B.A.; Columbia University, M.A.; Additional graduate work, Cornell University; Harvard University, University of Virginia.

**Mildred E. Gamble, M.A.**

Graduate, Indiana State Normal School; University of Pittsburgh, B.A.; Teachers College, Columbia University, M.A.

**Helen M. Becker, M.A.**

Graduate, Clarion State Normal School; University of Pittsburgh, B.S.; Teachers College, Columbia University, M.A.; Library Science, Clarion State College.

**Grace Pryor, M.Ed.**

Clarion State College, B.S.; University of Pittsburgh, M.Ed.; Additional graduate work at Duke University, University of Pittsburgh, Westminster College, Bucknell University, Pennsylvania State University.

Rena M. Carlson, M.A.L.S.

Greenville College, B.A.; Carnegie Institute of Technology, B.S.L.S., Graduate work at University of Southern California; University of Michigan, M.A.L.S

Charles R. Flack, M.A.

Library School, University of Wisconsin; University of Alberta, B.A.; University of Illinois, B.L.S., M.A.; Additional graduate study, University of Illinois and University of Chicago.

Martha Stewart, M.Ed.

Northwestern University, B.A.; Carnegie Institute of Technology, B.S. in L.S.; University of Pittsburgh, M.Ed.

Waldo S. Tippin, M.A., Professor, Education, Director of Athletics

Attended Kansas State College; Geneva College, B.S.; Graduate work University of Michigan, University of Pittsburgh; Columbia University, M.A.

## INDEX

Page	Page		
Academic Advisement .....	10	Course Numbering System .....	22
Academic Program, Student Responsibility for .....	23	Cultural Program .....	15
Accelerated Program .....	22	Degree Programs .....	37
Admissions Regulations Advanced Standing .....	24	Emeriti .....	146-147
Freshmen .....	23	Employment, Student .....	37
Freshmen, September, 1967 .....	25	Enrollment, Summary of .....	130
Administrative Staff .....	131	Evaluation of Credits .....	41
Advanced Standing, Admission with .....	24	Evening Classes .....	22
Athletic Organizations .....	16	Extension of Certificates .....	41
Automobiles, Regulations concerning .....	22	Faculty .....	133-148
Board of Education, State .....	131	Fees .....	28-33
Board of Trustees, Clarion State College .....	130	Activity .....	28
Calendar .....	4-5	Basic .....	29
Campus and Facilities .....	6	Deposits .....	30
Carlson Library .....	7	Diploma .....	31
Certification, Teaching .....	40	Housing .....	30
College Entrance Board Examinations .....	25	Late Registration .....	31
Counseling Service .....	10	Library Science .....	29
Course Descriptions .....	80-129	Medical Service .....	31
Anthropology .....	80	Out-of-State .....	29
Art .....	82	Payment of .....	32-33
Biology .....	84	Rebate of (Repayments) .....	32
Chemistry .....	87	Schedule Change .....	31
Economics .....	89	Student Activity .....	28
Education .....	91	Summary of .....	33
Elementary Education .....	93	Transcripts .....	31
English .....	94	Financial Aid Services .....	34
French .....	97	Food Service .....	11
Geography .....	98	Fraternities .....	15
German .....	100	Freshmen, Admission of .....	23-26
Health and Physical Education .....	102	Grading System .....	27
History .....	102	Health Service .....	11
Library Science .....	105	Housing Services .....	12
Mathematics .....	107	Humanities, Liberal Arts .....	74
Music .....	110	Majors in .....	74
Philosophy .....	115	Health and Accident .....	11
Physics .....	116	Liberal Arts .....	70
Political Science .....	117	Admission and Fees .....	70
Psychology .....	118	Characteristics of .....	70
Russian .....	120	Curriculum .....	71
Safety Education .....	121	General Education Requirement .....	71
Science .....	122	Majors .....	
Sociology .....	122	Humanities .....	74
Spanish .....	123	English .....	74
Special Education .....	124	Foreign Languages .....	75
Speech .....	126	Music .....	75
Speech Pathology and Audiology .....	129	Philosophy .....	75
		Speech .....	75
		Theatre .....	75
		Natural Sciences and Mathematics .....	76
		Biological Sciences .....	76
		Chemistry .....	77

## INDEX (Continued)

	Page
Physical Geography .....	77
Mathematics .....	77
Physics .....	77
Social Sciences .....	78
Economics .....	79
Geography .....	79
History .....	79
Political Science .....	79
Psychology .....	79
Sociology-Anthropology ..	80
Objectives .....	70
Library .....	7
Library Science .....	60-63
Loans .....	35-37
Medical Service .....	31
Mentally Retarded, Special Education for Teaching of .....	63-65
Musical Organizations .....	17
Natural Sciences and Mathematics, Liberal Arts .....	76-80
Majors in .....	76-80
Newspaper, College .....	21
Nursing, Public School .....	68-69
Pennsylvania Board of Education (State) .....	131
Placement Service .....	13
Professional Organizations .....	19
Publications .....	21
Public School Nursing .....	68-69
Public School Student Teaching Centers .....	43-44
Rebate of Fees .....	32
Religious Life .....	21
Requirements (See Teacher Education and Liberal Arts)	
Residence Halls .....	8
Residence, Campus .....	12
Residence, Off Campus .....	13
Safe Driving and General Safety Education .....	63
Scholarships .....	34
Scholarship Requirements .....	26
Secondary Education, Course Distributions in Areas of Specialization in .....	48-62
Biology .....	48
Chemistry .....	49
Comprehensive Science ..	49
Earth and Space Science ..	50
English .....	51
French .....	52
Geography .....	52
German .....	53
History .....	53
Library Science .....	62
Mathematics .....	54
Physics .....	55
Russian .....	56
Safe Driving and General Safety Education .....	63
Social Studies .....	56
Spanish .....	59
Special Education .....	63-68
Speech .....	59
Social Program .....	15
Social Sciences, Liberal Arts Majors in .....	78
Sororities .....	15
Special Education .....	63
Extension of Elementary or Secondary Certificates ..	67
Mentally Retarded, Teaching of .....	63-65
Speech Pathology and Audiology .....	65-67
Speech Pathology and Audiology .....	65
State Board of Education .....	131
Student Activities .....	14
Athletic Organizations .....	16
Cultural Program .....	15
Fraternities .....	16
Musical Organizations .....	17
Professional Organizations ..	19
Publications .....	21
Religious Life .....	21
Service Organizations .....	21
Social Program .....	15
Sororities .....	15
Student Government .....	14
Student Affairs .....	10
Student Government .....	14
Student Personnel Services .....	10
Academic Advisement .....	10
Counseling Service .....	10
Cultural Program .....	15
Financial Aid .....	34
Food Service .....	11
Health Service and Insurance .....	11
Living Accommodations .....	11
Placement Service .....	13
Veterans' Affairs .....	13
Student Teaching .....	42-43
Public School Centers for .....	43-44
Study Year Abroad .....	23
Summer Sessions .....	23
Teacher Education .....	39
Certification .....	40

## INDEX (Continued)

Page		Page	
Course Distributions		Curricula, Eight Semester	
Areas of Specialization,		Sequence in	
Secondary .....	48-62	Elementary .....	46
General Education .....	41-45	Library Science .....	61
Library Science .....	60-62	Secondary .....	47
Objectives .....	39	Special Education	
Professional Education,		Mental Retardation .....	65
Elementary .....	46	Speech Pathology and	
Professional Education,		Audiology .....	67
Secondary .....	47	Trustees, Board of .....	130
Public School Nursing .....	68-69	Venango Campus .....	9
Requirements .....	41	Venango Campus, Course	
Safety Education .....	63	Offerings at .....	69
Special Education .....	63-67	Veterans' Affairs .....	13
Student Teaching .....	42	Withdrawals .....	26
Credits, Evaluation of .....	41	Yearbook, College .....	21
Curricula .....	40		

